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LIST OF ABBREVIATIONS

AA — *Arts Asiatiques*
AAnz — *Archäologischer Anzeiger*
AAs — *Artibus Asiae*
ABIA — *Annual Bibliography of Indian Archaeology*
ACASA — *Archives of the Chinese Art Society of America*
ActaO — *Acta Orientalia*, Copenhagen
ActaOH — *Acta Orientalia Academiae Scientiarum Hungaricae*
AI — *Ancient India*
AIEO — *Annales de l'Institut des Études Orientales*
AIUON — *Annali* (Istituto Universitario Orientale di Napoli)
AJA — *American Journal of Archaeology*
AM — *Asia Major*
AO — *Archiv Orientální*
AOr — *Ars Orientalis*
AS — *Asiatische Studien - Études Asiatiques*
ASIAR — *Annual Reports* (Archaeological Survey of India)
BAIPAA — *Bulletin of the American Institute for Persian (Iranian) Art and Archaeology*
BCH — *Bulletin de Correspondence Hellénique*
BEFAR — *Bibliothèque des Écoles Françaises d'Athènes et de Rome*
BEFEO — *Bulletin de l'École Française d'Extrême-Orient*
Bell — *Belleten* (Türk Tarih Kurumu)
BEO — *Bulletin d'Études Orientales*
BK — *Bijutsu Kenkyu*
BMC — *Catalogue of Coins in the British Museum*
BMFEA — *Bulletin of the Museum of Far Eastern Antiquities*
BMMA — *Bulletin of the Metropolitan Museum of Art*
BMQ — *British Museum Quarterly*
BSEI — *Bulletin de la Société des Études Indochinoises*
BSOAS — *Bulletin of the School of Oriental and African Studies*
BZ — *Byzantinische Zeitschrift*
CAH — *Cambridge Ancient History*
CAJ — *Central Asiatic Journal*
CHI — *Cambridge History of India*
CII — *Corpus Inscriptionum Indicarum*
CRAI — *Comptes rendus des séances* (Académie des Inscriptions et Belles Lettres)
EI — *Epigraphia Indica*
ESA — *Eurasia Septentrionalis Antiqua*
EV — *Epigrafika Vostoka*
EW — *East and West*
FEQ — *Far Eastern Quarterly*
GBA — *Gazette des Beaux Arts*
HJAS — *Harvard Journal of Asiatic Studies*
HR — *History of Religions*
IA — *Indian Archaeology*
IC — *Islamic Culture*
IIFL — Morgenstierne, *Indo-Iranian Frontier Languages*
ILN — *Illustrated London News*

InIr — *Indo-Iranica*
IQ — *Islamic Quarterly*
IsmeoRepMem — *Reports and Memoirs* (Istituto Italiano per il Medio ed Estremo Oriente, Centro Studi e Scavi Archeologici in Asia)
JA — *Journal Asiatique*
JAOS — *Journal of the American Oriental Society*
JAS — *Journal of Asian Studies*
JASB — *Journal of the Asiatic Society of Bengal*
JdI — *Jahrbuch des Deutschen Archäologischen Instituts*
JHS — *Journal of Hellenic Studies*
JIAI — *Journal of Indian Art and Industry*
JKPK — *Jahrbuch der Königlichen Preussischen Kunstsammlungen*
JNES — *Journal of Near Eastern Studies*
JPEK — *Jahrbuch für Prähistorische und Ethnographische Kunst*
JRAI — *Journal of the Royal Anthropological Institute of Great Britain and Ireland*
JRAS — *Journal of the Royal Asiatic Society of Great Britain and Ireland*
KO — *Kunst des Orients*
KSIA — *Kratkie soobščenija Instituta Archeologii*
KSIE — *Kratkie soobščenija Instituta Etnografii*
MASI — *Memoirs of the Archaeological Survey of India*
MCB — *Mélanges chinois et bouddhiques*
MDAFA — *Mémoires de la Délégation Archéologique Française en Afghanistan*
MIA — *Materialy i issledovanija po Archeologii SSSR*
MMAI — *Mémoires de la Mission Archéologique en Iran*
MPiot — *Monuments et mémoires publiés par l'Académie des Inscriptions et Belles Lettres* (Fondation Eugène Piot)
MS — *Monumenta Serica*
MSOS — *Mitteilungen des Seminars für Orientalische Sprachen*
NTS — *Norsk Tidsskrift for Sprogvidenskap*
NumChr — *Numismatic Chronicle*
OA — *Oriens Antiquus*
OM — *Oriente Moderno*
OrA — *Oriental Art*
OZ — *Ostasiatische Zeitschrift*
PkA — *Pakistan Archaeology*
QDAP — *Quarterly of the Department of Antiquities in Palestine*
RA — *Revue Archéologique*
RAA — *Revue des Arts Asiatiques*
RAL — *Atti della Accademia Nazionale dei Lincei* (S. VII: *Atti della Reale Accademia d'Italia*): *Rendiconti, Classe di Scienze morali, storiche e filologiche*
RCAJ — *Royal Central Asian Journal*
REI — *Revue des Études Islamiques*
RHR — *Revue de l'Histoire des Religions*
RSO — *Rivista degli Studi Orientali*
SA — *Sovetskaja Archeologija*
SE — *Sovetskaja Etnografija*
SI — *Studia Islamica*
SOR — *Serie Orientale Roma* (Istituto Italiano per il Medio ed Estremo Oriente)
TOCS — *Transactions of the Oriental Ceramic Society*
TP — *T'oung Pao*
ZDMG — *Zeitschrift der Deutschen Morgenländischen Gesellschaft*

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On the Probable Presence of the Urial (*Ovis vignei* Blyth) at the Protohistoric Site of Shahr-i Sokhta (Sīstān, Iran)

by BRUNO COMPAGNONI

The sheep skull remains found during excavation campaigns at Shahr-i Sokhta (3200 - 1800 B.C.) in Sīstān (Iran) carried out in 1967-1970 by the Italian Archaeological Mission included one skull which differed both in size and shape from the others, all of which have been attributed by the author to the domestic form. The skull comes from sector XIG 4 ㉘ (excavated in 1968), which belongs to phase 5 and contains materials from phases 6 and 5, is of Period II in the local chronology, and may be dated as (2750) 2600 - 2450 (2350) B.C.

The Skull

The cranial fragment in question consists of a part of the frontal bones together with a large basal portion of both horncores, the parietals, the temporals, the occipital and the ethmoid. This specimen, serial no. 67, has been compared with the other skulls bearing serial nos. from 51 to 60 and from 63 to 69, particularly with specimens 65, 66, 68, 69, the only ones with portions of horncores.

On the whole it is larger and proportionately longer than the others which, although more incomplete, obviously appear to be squatter.

The frontal is more developed in the caudal portion (distance between the straight line joining the nearest points on the horncores and bregma: 39.0 mm. as

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(*) The author is from the Servizio Geologico d'Italia, Rome. He wishes to thank Dr H.-P. Uerpmann for discussions on the subject, on which some of the hypotheses outlined here are based, and for his critical reading of the manuscript, Dr G.L. Badam for having provided him with numerous measurements concerning bones of *O.vignei*, kept by the Zoological Survey of India, Calcutta, the University of Baroda and Deccan College, Prof. E. Cirese for the drawings and Mr G. Silvestrini of IsMEO for the photographic documentation.

against 23.5-28.0 mm.) also because of the almost straight-line behaviour of the fronto-parietal suture, the bregma being almost parallel to the line joining the caudalmost points of the base of the horncores, while the bregma in the other skulls is in a more cranial position.

The anterior wall of the frontal bone is thicker than in the other skulls in which it can be observed (no. 69, and especially nos. 65, 66 and 68).

However, the main difference is in the position and shape of the horncores. They are set in the frontal bone comparatively close together (about 42.0 mm. apart). They are ovoidal in cross section near the base and, judging by the portions remaining, pointed upwards and outwards before curving slightly towards the latero-caudal corner. In the domestic specimens the horncores are set more laterally on the frontal bone (minimum distance between them: 55.5-60.0 mm.), varying in cross section at the base from piano-convex to subelliptic. They curve immediately towards the latero-caudal corner without first pointing upwards.

The parietal is larger, especially in the lateral portion between the horncores base and the squamous temporal, where it is slightly convex and not concave like the other specimens.

The squamous temporal is larger so that, together with the lateral portion of the parietal, it forms a much larger temporal fossa than in the other skulls, and thus the temporal line, which is short and regularly arched in the domestic specimens, is somewhat longer in the specimen in question and has an almost straight central portion.

The occipital has a smaller and shallower condyloid fossa.

Comparison with several forms of wild sheep (*Ovis musimon* Pallas of Sardinia, *O.orientalis* Gmelin of Northwest Iran, *O.vignei* Blyth of the Punjab and Kashmir and *O.cycloceros* of the Khorassan) has allowed us to establish the close likeness of our specimen with the Urial (*O.vignei*). More in detail, our specimen was found to resemble closely the skull of *O.vignei* no. 1937.4.8.4 in the British Museum (Natural History), coming from the Punjab. The latter is slightly smaller and has a shorter squamous temporal (53.5 as against 62.5 mm.), although its more highly marked cranial sutures could mean that it is a slightly younger individual. Another skull of *O.vignei*, no. 34621 of the Museum of Comparative Zoology of Harvard University, coming from a site near Kiria (Kashmir) and morphologically similar to our specimen, was on the contrary found to be larger.

This fact would suggest that the skull in question ought to be assigned to a smaller form of Urial of the *O.vignei* type. As, at the present time, the subspecies *blanfordi* Hume, 1877, lives in the hills of Pakistani Baluchistan, and, according to Sgaramella — who refers to it as « *Ovis musimon cyclocoides*= (?) *O.musimon blandfordi* (Hutton, 1942) » (*sic!*) — is present in the mountains around Sīstān, the Shahr-i Sokhta form could be related to it.

Against this assignment there would be only the small size of the horncores in the archaeological specimen (¹). However, this could have been a specimen kept or bred in captivity, a condition that could have affected horn growth.

Still considering the specimen to be a wild sheep species, there is another possible hypothesis.

Sīstān lies on the northwest border of a region (the Kerman Province) which is geographically contained between the area of distribution of *O.laristanica* Nasonov, 1909, to the west and Blanford's urial to the east, which is characterized by a population (the Kerman hybrid) that is the issue of hybridization between the two forms and possesses urial type horns (Valdez *et alii*, 1978). Unfortunately, I have no information on the morphological characteristics and size of this form nor on those of the Laristan species and can therefore not come to any conclusion as regards this hypothesis.

Lastly, in view of the small size of the Shahr-i Sokhta skull, it could conceivably also be assigned to a domestic sheep, either local or imported. However, if it was a local form an explanation would have to be found for the absence of transition forms between this skull and the others, which show a high degree of homogeneity, especially as far as the position of the horncores on the skull are concerned. Its assignment to an imported domestic form would be opposed mainly by the very harsh environmental conditions of Sīstān, by no means favourable to the introduction of breeds coming from different habitats, unless the introduction was effected purely for reasons of food supply (²).

The Postcranial Bones

The postcranial bones of sheep found at Shahr-i Sokhta require separate treatment.

The study of the sheep and goat material from the 1967-1970 excavation campaigns has not yet been completed owing to the large quantities of bones to be examined and to the objective difficulties involved in such a survey.

However, for some of them, including the radius, the metacarpus, the calcaneum and the metatarsus, the distinction between goats and sheep has already been made.

From an observation of the whole specimens of the above bones it is not an easy task to identify those having some likelihood of referring to the skull in question as the sizes of the various specimens of each bone type, although showing considerable variation, do not differ greatly from one specimen to another.

(¹) Uerpmann, although acknowledging that its morphological features are those of the Urial, does not remember ever seeing an *O.vignei* specimen with such small horns.

(²) The author, during his sojourn in Sīstān in 1972 and 1975, noticed the presence of specimens belonging to other breeds only in the herds from the city of Zabul.

In fact, the maximum length of the radius varies from 147.0 mm. to 191.0 mm., M = 160.0 (N = 30); that of the metacarpus from 120.0 to 155.5, M = 140.9 (N = 28); that of the calcaneum from 47.5 to 69.2, M = 57.6 (N = 185); and that of the metatarsus from 128.5 to 165.5, M = 148.9 (N = 23).

If the measurements reported by Banerjee and Ghosh (1974) for both the present-day *O.vignei* and the archaeological form of Burzahom (Kashmir) are taken into consideration, the sizes of the larger specimens of radius, metacarpus, calcaneum and metatarsus from Shahr-i Sokhta could be included among the wild species, as they lie in a position intermediate to those quoted by the above authors; indeed, the calcaneum sizes appear to be much larger (*).

As regards the size of the living forms, Siddiqi (1961) reports a height at the shoulder of 91.44 cm. for the *O.vignei* of Kashmir and Chitral and of 81.28 cm. for the form *O.punjabiensis*, of the Punjab, a subspecies of *O.vignei* (Nadler *et alii*, 1973). Roberts (1977) attributes to the Urial an average height of 76.15 cm. and reports that the form from Baluchistan is bigger and less stocky than the one from the Punjab.

The maximum height at the withers according to the measurements published by Banerjee and Ghosh (according to Teichert's factors in von den Driesch and Boessneck, 1974) is 79.2 cm. for the present-day form and only 73.6 cm. for the archaeological one, which is a much lower figure than that quoted by Siddiqi and Roberts for the Kashmir Urial. The height at the withers that can be obtained from measurements carried out on the larger Shahr-i Sokhta bones seems to vary from 75.1 cm. (metatarsal) to 78.9 cm. (calcaneum). This height, at least in the latter case, could lie within the range of values of the Urial, although towards the bottom of the scale, like those values relating to the forms inhabiting lower altitudes that are found in Baluchistan and in the Punjab.

The possibility of a few post-cranial sheep bones from Shahr-i Sokhta belonging to a smaller form of *O.vignei* would also be supported by the small size of the skull XIG 4 ⑳.

October 1979.

(*) Badam provides, among numerous other measurements, the following greatest lengths concerning the bones at issue:

radius: mm. 141.3-204.1, M = 176.0 (N = 3)
metacarpus: mm. 122.8-181.5, M = 147.4 (N = 3)
calcaneum: mm. 53.8; 71.3 (N = 2)
metatarsus: mm. 132.0-194.0, M = 157.3 (N = 3).

Such measurements are acquired starting from different skeletal elements. Unfortunately, it has not been possible to check if such elements are part of complete skeletons, and, consequently, we cannot say anything about their possible age, sex and geographical provenance.

N MILLIMETRES) *

Domestic sheep om Shahr-i Sokhta									*O.vignei* B.M. 1937.4.8.4	*O.cycloceros* B.M. 1909.11.17.1
58	59	60	63	64	65	66	68	69		
					92.5	90.5	107.0	98.5	100.0	99.0
					81.0	78.0	84.0	82.0	92.0	88.0
					60.5	66.0	55.5	61.5	41.5	46.5
					48.5	43.0	56.0	52.5	61.5	62.0
					36.0	33.0	42.0	37.5	38.5	40.5
					90.0	*82.5*				
					25.5	23.5	28.0	25.0		
					58.0	54.0	65.5	57.5		
		39.5	34.0	33.0	32.5	33.0	35.5			
		59.0	51.0		50.5		57.5		53.5	65.0
					32.0		35.0	36.0	40.0	42.0
					67.0					
.0				42.5	42.0		*40.0*			
.0			74.5		73.0					
.5		56.0	53.0		48.0	47.0			55.0	61.0
.0	53.5	52.0	*50.5*	53.5	*48.0*				55.0	55.0

TABLE OF MEASUREMENT

	Urial from Shahr-i Sokhta							
Number of the specimens	67	51	52	53	54	55	56	57
1 - Skull breadth at the lateral base of the horncores	100.0							
2 - Greatest parietal breadth to the contact of the frontal	94.0		91.0				89.0	
3 - Least breadth between the bases of the horncores	42.0							
4 - Greatest diameter of the right horncore base	59.0							
5 - Least diameter of the right horncore base	40.5							
6 - Distance between the straight line of the least breadth between the bases of the horncores and opisthion	115.5							
7 - Distance between the straight line of the least breadth between the bases of the horncores and bregma	39.0							
8 - Distance between the straight line of the least breadth between the bases of the horncores and the parietal-occipital suture	77.5							
9 - Distance between the caudalmost point of the horncore and the point where the parietal-occipital and parietal-temporal sutures meet	47.0	33.5	33.0	32.5		35.5	36.0	
10 - Length of the squamous temporal	62.5					53.5	55.0	
11 - Parietal length (between bregma and parietal-occipital suture)	39.0				26.0		32.5	
12 - Bregma-opisthion	81.0		74.0		69.5		*76.0*	
13 - Least parietal breadth	46.0		44.5	44.0	44.5		*45.0*	*42.5*
14 - Othion-othion	82.0			72.0				74.0
15 - Least occipital breadth	57.5	60.0	61.0	51.0			55.0	52.0
16 - Greatest breadth of the occipital condyles	53.0	51.0	*51.5*	49.5			*49.5*	*47.0*

* The measurements in italics are approximate.

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The Equids of the Achaemenian Town of Dahan-i Ghulaman (Sīstān, Iran)

by Bruno Compagnoni

Introduction

Dahan-i Ghulaman is an Achaemenian town dating from the end of the 6th/beginning of the 5th to the 4th century B.C. During the excavations carried out in 1962 and 1965 by the Italian Archaeological Mission in Iran led by Prof. U. Scerrato (¹), and also during the initial stages of restoration of the monuments in 1975, numerous remains of animal bones were found. They were discovered in buildings 2, 3 and 16, houses 4, 6 and 7, and in the street running between houses 6 and 7. A total of about 2850 finds were made, plus a few non-classifiable bone flakes and a few human bones.

In a preliminary examination of the material carried out directly by the writer in November 1975 at Zabul (Sīstān), where the bones were kept, the following species were identified: *Equus asinus, Equus hemionus, Equus caballus, Camelus* sp., *Sus scrofa, Bos indicus, Gazella subgutturosa, Capra hircus hircus, Ovis aries*, as well as small carnivores, micromammals, birds, fish, and two fresh-water lamellibranch shells (*Unionidae*). 75% of the bones belong to small ruminants, 10% to the ox, while the other animal groups are present in even smaller percentages (micromammals approx. 5%, equids approx. 4%, birds approx. 3%, pigs approx. 2%, carnivores approx. 1%, and the camel and fish in negligible quantities).

(*) The author is from the Servizio Geologico d'Italia, Rome. He is grateful to Profs. J. Boessneck and A. von den Driesch for having read and criticized this paper, and to Prof. S. Bökönyi who, during a recent visit to Rome, was so kind as to review with him the osteological materials from Dahan-i Ghulaman and other sites in Sīstān kept at IsMEO, and to read this paper.

The author extends his grateful thanks to Mr G. Silvestrini of IsMEO for taking the photographs, which are filed in the archives of the Museo Nazionale d'Arte Orientale in Rome.

(¹) U. Scerrato, « A Probabile Achaemenid Zone in Persian Sistan », *EW*, XIII, 1962, pp. 187-197; Id., « Excavations at Dahan-i Ghulaman (Seistan, Iran). First Preliminary Report (1962-63) », *EW*, XVI, 1966, pp. 9-30.

The present note deals with the results of the survey of equid remains until the examination of the great mass of material left in Iran can be completed.

The study of the equids is particularly interesting as it is connected with the problem of when the horse and the ass were introduced into the region. Besides, as this is an Achaemenid site, and having observed that the bones, according to their different sizes, could be subdivided into three different categories, the question arises as to whether the smallest ones could belong to the dwarf horse, often depicted especially at Persepolis, but so far unsupported by any osteological evidence.

The finding of a miniature horse in 1965 on the shores of the Caspian (2) is evidence of the present existence of ponies in Iran and again raises the problem of the Achaemenid dwarf horse.

Since certain characteristics of the Caspian miniature horse resemble those of the half-ass and the ass (3), any examination of equid bones belonging to the Achaemenid period calls for the greatest care.

The incompleteness of several finds, especially the teeth, has often prevented a precise species assignment being made.

The equid bones from Dahan-i Ghulaman total 106 and are listed as follows according to their find-spot (4). Wherever possible the species to which they belong is also indicated.

Building 2 (QN2) - 10 bones

bone type	provenance	species
upper P or M (incomplete)	*corte* XIII - I	?
right M^1 (incomplete)	XXXI - I	? half-ass
left P_3	18 II	? half-ass
left M_2	*corte* IV - I B	? half-ass
right patella	16 A-I ?	ass
3rd right metatarsal (distal extremity)	16 B-S	ass
3rd left metatarsal (distal extremity)	18 II	half-ass
1st phalanx (distal portion)	XXXI-I	? horse
1st phalanx (proximal portion)	14 A-I	ass
3rd phalanx (fragment)	XXXI-I	? half-ass

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(2) L. Firouz, « A Rare Pony on the Shores of the Caspian », *Animals*, 13, 2, 1970, pp. 60-62; Id., « The Caspian Miniature Horse of Iran », in *Field Research Projects*, Miami Florida, 1972, pp. 1-11.

(3) S. Bökönyi, « Once More on the Osteological Differences of the Horse, Half-ass and Ass », in *Field Research Projects, cit.*, pp. 12-23; H. Shehrsevi, M. Hosseinion, « Preliminary Report on the Basic Skeletal Differences of the Caspian Miniature Horse as Compared to Other Iranian and European Breeds », *ibid.*, pp. 24-25.

(4) The first number or letter refers to rooms, others refer to levels of excavation.

Building 3 (QN3) - 2 bones

bone type	provenance	species
right P_3	B 3-III	horse
right M_3	S 9	? ass

House 4 (QN4) - 21 bones

bone type	provenance	species
right P^4	Vb-2 II	?
right M^1	Vb-2 I	?
lower jaw	Va	half-ass
left D_2, D_3 and D_4 (same individual)	III	? ass
right scapula	Va-I	horse
navicular, small cuneiform, large cuneiform, 2nd and 3rd metatarsals * (left, same individual)	Va-I	horse
3rd metatarsus, 1st and 2nd phalanges (right, same individual)	1-S	ass
right 3rd metatarsal (distal extremity)	III-I	ass
right talus	2-S	ass
right 1st, 2nd, 3rd (incomplete) anterior phalanges (same individual)	IX-I	ass
1st right anterior phalanx *	III-I	ass

* bearing signs of butchering

House 6 (QN6) - 35 bones

bone type	provenance	species
occipital	A-II	ass or half-ass
left intermaxilla with I^1-I^2 and erupting I^3	O-III	ass
right intermaxilla with I^2-I^3 and portion of upper jaw with alveolus of C	F-II	horse
left upper jaw with P^2-M^1	O-III	? horse
left lower jaw (fragment)	F-II	?
right M^2	A-IV	?
right M^2	F-I	?
left M_2 and M_3 (perhaps of the same individual)	F-II	? ass
left P_3	F	? ass
lower P or M (incomplete)	F-I	ass or half-ass
left I^1, I^2 and right I^2 (incomplete, perhaps of the same individual)	A-IV	?
right scapula	H	? half-ass

bone type	provenance	species
right radius (distal extremity)	D-III B	ass
right radius (distal extremity)	F	ass
capitatum, 3rd metacarpal, 1st phalanx [1] (right, same individual)	D-IV	ass
left 3rd metacarpal	A-II	ass
right pelvis	*sud* III	ass
right patella	B-III	half-ass
left navicular, 3rd metacarpal (incomplete proximal extremity)	*sud*	horse
left anterior 1st phalanx	A-II	ass
right posterior 1st phalanx [2]	D-IV	ass
left posterior 1st phalanx	ES - *sud*	ass
anterior 2nd phalanx	D-IV B	horse
posterior 2nd phalanx [2]	D-IV	half-ass
posterior 2nd phalanx [1]	D-IV	ass
posterior 3rd phalanx	D-IV	ass
posterior 3rd phalanx	D-IV B	half-ass
3rd phalanx (incomplete)	*sud*	? half-ass
3rd phalanx (incomplete)	*est sud*	? horse

Street between houses 6 and 7 (QN6-7) - 8 bones

bone type	provenance	species
left P^2	I	?
right P^2	I	?
M_1, M_2 & M_3 (incomplete, perhaps from the same individual)		? ass
left radius (distal extremity)	I	horse
right patella		horse
left 1st posterior phalanx *		ass

* bears signs of butchering

House 7 (QN7) - 4 bones

bone type	provenance	species
right P^3	G-I	?
canine	G-I	?
left tibia (distal extremity) *	B-I	horse
left 1st posterior phalanx	B-I	ass

* bears signs of butchering

Building 16 (QN16) - 26 bones

bone type	provenance	species
right M^2 (incomplete)	S	?
right M^3	*sud*-I S	?
left radius (fragment of distal extremity)	27 I	?
left 3rd metacarpal (proximal extremity) and 4th metacarpal (same individual)	30 S	horse
left capitatum and unciniform, 3rd metacarpal (proximal extremity) and 4th metacarpal (same individual)	24-I	half-ass
left capitatum, scaphoid, semilunar, pyramidal, trapezoid and 2nd metacarpal (same individual)	11 B-I	horse
left 2nd-3rd metacarpal (fused, fragment of proximal extremity)	12-3 S	horse
right 3rd metacarpal (incomplete proximal extremity)	31-I	? half-ass
right 4th metacarpal	I	? half-ass
right tibia (incomplete subadult distal extremity)	I	ass
1st phalanx (distal portion), 2nd phalanx (incomplete) and 3rd phalanx (anterior, same individual)	*sud*-I S	ass
1st phalanx (distal fragment)	27	ass
1st phalanx (distal fragment)	16-II	ass
1st phalanx (distal fragment)	S	ass
3rd anterior phalanx	I *sud*	horse

Description of the Finds

a. Head bones

These consist of an occipital, two intermaxillae, one maxilla, two mandibles and twenty-nine teeth.

— The occipital (QN 6, A III) lacks part of the external occipital protuberance, of the nuchal crests and of the distal portions of the jugal apophyses. Its size and rather long shape seem to point to the ass or the half-ass. It is morphologically quite similar to the Shahr-i Sokhta specimen (8), although larger. However, owing to the incompleteness of the find it is not clear whether the minimum width is situated at the mastoid crest as is usually the case in the half-ass.

— The two intermaxillae are of different sizes. The larger one (QN 6, FII), right, with I^2 and I^3 and the canine alveolus, appears to belong to an

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(8) B. Compagnoni, « The Bone Remains of Equus Hemionus from Shahr-i Sokhta », in R.H. Meadow, M.A. Zeder (edd.), *Approaches to Faunal Analysis in the Middle East,* (Peabody Museum Bulletin, 2), Cambridge, Mass., 1978, pp. 105-106.

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adult ♂ horse in view of the size and wear of the teeth. The smaller (QN 6, O III), left, with I^1 and I^2 relatively unworn and I^3 in eruption, must have belonged to a young individual that, in view of the size and the relatively slight hypselodontia (6) of the teeth, probably belongs to an ass.

— Maxilla and loose upper teeth: a left maxilla (QN6, O III) with P^2-M^1, three incisors (QN6, A IV), perhaps belonging to the same individual, two P^2, one P^3, one P^4, two M^1, three M^2, one M^3 and a fragment of P or M. Of these only the right P^2 (QN6-7,I) and the P^3 (QN7, G I) display a small fold typical of horses' teeth. The anterior and posterior interstylar faces are usually only slightly concave, and slightly convex in the middle; only in the upper jaw teeth, in left P^2 (QN6-7,I) and M^2 (QN16,S) are they fairly concave. Except in P^2, the protoconid has the same development both anteriorly and posteriorly, although a little less anteriorly in P^3 and P^4.

As far as the specific assignment of the finds is concerned, we think that the maxilla may be attributed to the horse, although dubitatively, whereas we shall not attempt a specific distinction of the loose teeth, as the difficulties involved therein are well known.

— Mandibles and loose lower teeth: one of the two mandibles (QN4, Va *sud*) comprises the complete incisor part and left molar part attributable to a ♂ adult owing to the presence of the canines and the state of tooth wear. The other (QN6, F II) is a symphyseal portion corresponding to the mental foramen. The loose teeth comprise a D_2, a D_3 and a D_4 belonging to the same individual, three P_3, one M_1, three M_2, three M_3 and a fragment of P or M.

Only the P_3 (QN3, B 3-III) can be assigned to the horse, because of the U-shaped metaconid-metastylid valley and its size, i.e. slightly greater than the other two P_3. All the other teeth, including those of the mandible, display a metaconid-metastylid valley in the shape of a more or less open V, and thus may be attributed to the ass or the half-ass. Of the loose teeth, in view of the width of the V of the metaconid-metastylid valley and their dimensions, the three D, P_3 (QN6, F), M_1, M_2 and M_3 (QN6-7), M_2 and M_3 (QN6, F II) and M_3 (QN3,S 9) could belong to the ass, and P_3 (QN2, 18 II), M_3 (QN2, *corte* IV-I B) to the half-ass. The mandible (QN4, Va *sud*) can be assigned to the half-ass owing to its size, the length of the cheek-tooth row, with a particularly long M^3, and to the hypselodontia of the incisors. It also displays a greater molar length compared with that of the premolars (3P/3M = 0.95). In the literature in my possession this feature is reported however only for ass mandibles.

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(6) H.G. Stehlin, P. Graziosi, « Ricerche sugli Asinidi fossili d'Europa », *Mémoires de la Société Paléontologique Suisse,* 56, 1935, pp. 4-5.

b. Bones of the postcranial skeleton

— Scapula: the two right specimens appear to be different in morphology and size. The larger (QN4, Va I) consists of the articular portion alone, while the other (QN6, H) also has the squama. The first of the two has a craniocaudally longer articular process, a latero-medially flatter neck and a supraglenoidal tubercle further from the glenoid cavity which is less round with the glenoidal fissure almost absent. Because of its size and morphology, the former could be assigned to the horse and the latter to the half-ass.

— Radius: four distal extremities are available which can be subdivided into two groups according to their size. The left radii (QN6-7,I) and (QN16, 27I), the second of which is fragmentary, could be from a medium-size horse while the smaller right ones (QN6, F) and (QN6, D III B) can be assigned to the ass. The latter, almost identical in size, display a few morphological differences. The first is a little flatter dorso-ventrally with the extensor grooves of the carpus radial and the dorsal extensor of the phalanges less hollow.

— Metacarpus: the nine specimens comprise one 2nd metacarpal, five 3rd metacarpals, two of which intact, three 4th metacarpals and one fused 2nd-3rd metacarpal. Also the metacarpals can be divided into three groups in order of decreasing size which ought to correspond to the horse, the half-ass and the ass.

2nd metacarpal: the left specimen (QN16, II B 1) consists of a proximal extremity. It belongs to the same individual as several carpal bones. In view of its size it can be assigned to the horse.

2nd-3rd metacarpal: the left specimen (QN16,12-3 S) consists of a 2nd metacarpal fused with a fragment of a 3rd. As the 2nd metacarpal has the same size as the specimen (QN16,II B1) it too can be assigned to the horse.

3rd metacarpal: two whole specimens, one left (QN6,A II) and one right (QN6, D IV), can be assigned to the ass owing to their practically identical size, index of robustness (13.3 and 13.1, respectively) and the presence of a fossette on the distal ventral portion of the diaphysis. The third specimen (QN 16, 31 I) consists of an incomplete right proximal extremity, slightly larger than the preceding ones and virtually the same as the following specimen (QN16, 24 I) which could be assigned, at least provisionally, to the half-ass.

3rd and 4th metacarpals: these comprise two specimens consisting each of a 3rd and a 4th metacarpal not fused together. The larger left one (QN16, 30 S) can be assigned to the horse; the other left one (QN16, 24 I) comes from the same individual as several carpal bones and probably belongs to a half-ass.

4th metacarpal: the right specimen (QN16, I), almost equal in size to (QN16, 24 I), probably also belongs to the half-ass.

— Carpus bones: of the eight specimens, five — i.e. one scaphoid, one semi-lunar, one pyramidal, one trapezoidal and one capitatum — belong to the same individual as the 2nd metacarpal (QN16,11 B I), and can thus be assigned to the horse; two of them, one capitatum and one unciniform, belong to the same individual as the 3rd and 4th metacarpals (QN16, 24 I) and are related to the half-ass; the last one, a capitatum, belongs to the same individual as the 3rd metacarpal (QN6, D IV), belonging to the ass.

— Pelvis: the specimen (QN6, sud III), comprising a right acetabular portion (acetabulum 41.5 x 38.5 mm.) ought, in view of its small size, to belong to the ass.

— Patella: there are three right specimens of different sizes. The smallest (QN2, 16 A I?) belongs to an ass, the middle one (QN, B III) to an half-ass and the largest one (QN6-7) to a horse. Morphologically speaking the latter has a less round base than the others.

Compared with the Shahr-i Sokhta half-ass patella (7), the specimen (QN6, B III) is slightly smaller and the lateral portion of the articulatory surface is longer.

— Tibia: these consist of two different-sized distal portions. The left one (QN7, B I) is larger and belongs to the horse; the right (QN16, I) is an incomplete subadult specimen and its small size indicates that it belongs to the ass.

— Metatarsus: there are six 3rd metatarsals and one 2nd metatarsal. Also these are of different sizes. The two larger, left specimens (QN4, Va I) are intact and belong to the same individual as the 2nd metatarsal and (QN6, *sud*), an incomplete proximal portion, probably belong to the horse owing to their size. The left specimen (QN2, 18 II), which consists of a distal portion somewhat gnawed by rodents, is of the same order of size as the half-ass although it is smaller than the young Shahr-i Sokhta specimen (8). The smaller specimens, i.e. three right distal extremities (QN2, 16 BS), (QN4, III-I) and (QN4, 1-S), belong to the ass.

— Tarsus bones: five in number, of which a navicular, a large cuneiform and a small cuneiform belong to the same individual as the 3rd metatarsal (QN4, Va I), and another navicular belongs to the same individual as the 3rd metatarsal (QN6, *sud*), all four thus belonging to the horse; one right talus (QN4, 2-5), that belongs to the ass owing to its small size.

— First phalanx: fifteen specimens, nine of which whole, four anterior: (QN4, IX-I), from the same individual as the second and third phalanges, (QN4, III-I), (QN6, A III), (QN6, D IV [1]), of the same individual as the capitatum and the 3rd metacarpal, and five posterior ones: (QN4, 1-S), (QN6, D IV [2]), (QN6, ES- sud), (QN6-7) and (QN7, B I), which can all be assigned to the ass both in view of their size and of their index of robustness (31.6 - 37.7). The incomplete specimen (QN2 XXXI-I), consisting of a distal half, is larger and could belong to the horse. The other fragments, in consideration of their size in comparison with the whole specimens, probably all belong to the ass.

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(7) Compagnoni, *op. cit.*, p. 111.

(8) Id., *ibid.*

— Second phalanx: six specimens obviously belonging to three equid forms in view of the difference in size. The larger, anterior specimen (QN6, D IV B) belongs to the horse because of its size, while the medium-size posterior specimen (QN6, D IV [2]) can be assigned to the half-ass. The other four smaller ones, i.e. the anterior (QN4, IX-I) and (QN16, *sud* I S) (the latter incomplete) and the posterior (QN4, 1-S), (QN6, D IV [1]) can be assigned to the ass.

— Third phalanx: eight specimens, four of which are whole. Also in the case of the third phalanges there are individuals belonging to three different forms of equid. There is some remaining doubt over the incomplete specimens. The large anterior specimen (QN16, I sud) with a subtriangular articulatory surface and a highly rounded solar edge belongs to the horse, whereas the assignment to the horse of the fragment (QN6, *est sud*) is doubtful. Certainly belonging to the half-ass is the posterior phalanx (QN6, D IV B), which is almost identical in size and morphology to the Shahr-i Sokhta specimens (⁹), differing from them only in its slightly less pointed solar edge. Also fragments (QN6, *sud*) and (QN2, XXX-I) conceivably belong to the half-ass. The other three specimens (QN16, sud I S), (QN4, IX-I) (anterior) and (QN6, D IV) (posterior), belong to the ass.

Conclusion

From what has been said in the descriptive part, it is clear that the Dahan-i Ghulaman fauna includes three equid species, evidence for which consists of the constant presence of three groups of sizes in almost all the bones. After direct comparison with present-day skeletons and with the data reported in the literature, I am inclined to attribute the larger bones to the horse (*Equus caballus*) the medium-size ones to the half-ass (*Equus hemionus*) and the smaller ones to the ass (*Equus asinus*). The medium-sized equid has been related for two main reasons to the half-ass and not the mule, although the latter may well have been present too. Firstly, it is quite likely that the half-ass which, together with the *Gazella subgutturosa*, was certainly one of the most typical forms of local wildlife, was present in an archaeological site of Sīstān, a desertic and subdesertic region. In fact, these species were present at Shahr-i Sokhta (3200-1800 B.C.) as attested by the bone remains found there (¹⁰). Furthermore, as pointed out earlier,

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(⁹) Compagnoni, *op. cit.*, p. 116.

(¹⁰) B. Compagnoni, « The Bone Remains of Gazella (Trachelocele) Subgutturosa from Shahr-i Sokhta », in Meadow, Zeder, *op. cit.*

the medium-sized bones are almost indentical in size and morphology to the Shahr-i Sokhta half-ass. Although there no longer seem to be any half-asses living in Sīstān (11), their disappearance must have been quite recent if it is true that they were still abundant there in the early 1900s (12).

As far as the size of the Dahan-i Ghulaman horse is concerned, the metatarsus (QN4, Va I) (intact) enables the height at the withers to be calculated by means of Kiesewalter's factor of 5.33 (13). It must have been medium-small in size (130.6 cm.) according to Vitt's subdivision (1952) (14). Its size was thus comparable to that of the horses in the Kātelai graves (Swāt, Pakistan) (15), dating back to a period between 1520 (± 150) and 170 (± 45) B.C., and to the smaller horse specimens found at Takht-i Suleimān (Azerbaijan, Iran) (8th-10th century B.C. (16).

In view of the foregoing, at least in the material so far examined, I believe it is possible to exclude the presence at Dahan-i Ghulaman of a very small horse that could be related to the representations mentioned earlier.

It is not possible to obtain the height of the ass at the withers despite the two whole metacarpi found as no factors exist whereby it can be calculated through the length of the long bones. Nevertheless, a comparison with the data from literature on the Middle East asses shows that the values of the Dahan-i Ghulaman metacarpi are intermediate between those of the Takht-i Suleimān asses (17) and only slightly smaller than the smaller-size metacarpi found at Korucutepe (Eastern Anatolia) (18), which the authors believe to belong to medium-size asses. The presence of the three species at Dahan-i Ghulaman expressed in percentage obtained from the minimum number of individuals is found to be 43.5% for the ass, 26.1% for the half-ass and 30.4% for the horse, as the ass accounts for ten individuals, the half-ass six and the horse seven.

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(11) E. Firouz, *Environment Iran,* Tehran, 1974.

(12) H. McMahon, « Recent Survey and Exploration in Seistan », *The Geographical Journal,* 28, 3-4, 1906, p. 337; G.P. Tate, *The Frontiers of Baluchistan,* London, 1909, pp. 34, 68.

(13) A. von den Driesch, J. Boessneck, « Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmassen vor- und frühgeschichtlicher Tierknochen », *Säugetierkundliche Mitteilungen,* 22, 4, 1974, p. 333.

(14) Von den Driesch, Boessneck, *op. cit.,* p. 331.

(15) A. Azzaroli, « Two Protohistoric Horse Skeletons from Swāt, Pakistan », *EW,* XXV, 1975, pp. 353-358.

(16) R. Kolb, *Die Tierknochenfunde vom Takht-i Suleiman in der iranischen Provinz Aserbeidschan (Fundmaterial der Grabung 1969),* (Dissertation, Institut für Paläoanatomie), München, 1972.

(17) Kolb, *op. cit.*

(18) J. Boessneck, A. von den Driesch, « Tierknochenfunde vom Korucutepe bei Elâzig in Ostanatolien (Fundmaterial der Grabungen 1968 und 1969) », in *Studies in Ancient Civilization Korucutepe,* 1, Amsterdam, 1975.

As far as the problem of the date of introduction of the horse and the ass into Sīstān is concerned, the presence of both species at Dahan-i Ghulaman restricts the period to between 1800 and 600 B.C., as they so far appear to be absent at Shahr-i Sokhta. Although a third ass phalanx was found during the 1975 excavation campaign in superficial levels of the RWT zone of Shahr-i Sokhta, nothing proves that it belongs to the town's sequence nor that it is related to a more recent period.

Lastly, it is my opinion that the fauna remains from Dahan-i Ghulaman that are given here are of great importance in documenting the presence of the horse on the Iranian plateau, but unfortunately too little has been published so far on the equid remains from other, better documented archaeological sites in Iran. I refer in particular to Hasanlū Tepe, Persepolis, Pasargadae, Gadin Tepe and Susa, of which the fauna remains have not yet been published.

When the data from these settlements are finally available to scholars, I shall be able to place my results in a more complete historical picture.

October 1978.

TABLE I

Bone measurements of Dahan-i Ghulaman equids (in millimetres)

OCCIPITAL	(QN6, A III) (ass or half-ass)
Greatest breadth at the bases of the paraoccipital processes	105.0
acrocranion - basion	(102.0)
opisthion - basion	33.0
breadth at the mastoid crests	64.5
greatest breadth of the occipital condyles	79.8
greatest breadth of the foramen magnum	32.0

MAXILLA	(QN6, O III) (? horse)
P^3-P^4 alveolar length	86.0

MANDIBLE	(QN4 Va *sud*) (half-ass)
Breadth measured across the outer borders of the alveoli of I_3	48.0
Breadth measured across the outer borders of the alveoli of C	44.0
Breadth measured across the constriction	35.0
alveolar length of the cheek-tooth row	150.0
P_2-P_4 alveolar length	72.2
M_1-M_3 alveolar length	76.6

SCAPULA	(QN4, Va I) (horse)	(QN6, H) (half-ass)
Max. length	—	275.0
length ventral angle	93.0	83.0
length of glenoid cavity	53.8	52.0
breadth of glenoid cavity	47.5	48.7
min. length of neck	—	55.0

RADIUS	(QN6-7, I) (horse)	(QN6, F) (ass)	(QN6, D III B) (ass)
Distal breadth	74.5	58.2	57.7
breadth of distal articular surface	70.0	47.2	48.0
distal depth	—	32.7	33.8
distal articular surface depth	—	26.0	28.2

THIRD METACARPAL	(QN16, 30 S) (horse)	(QN16, 24 I) (half-ass)	(QN16, 31 I) (? half-ass)	(QN6, A II) (ass)	(QN6, D IV) (ass)
Max. length	—	—	—	175.0	170.0
prox. breadth	53.2	41.0	—	36.4	36.6
prox. depth	35.0	27.0	26.5	24.2	25.8
distal breadth	—	—	—	32.0	33.1
distal depth	—	—	—	24.7	26.0
min. breadth shaft	—	—	—	23.2	22.2
min. depth of shaft	—	—	—	16.0	16.3

CAPITATUM	(QN16, 11 B I) (horse)	(QN16, 24 I) (half-ass)	(QN6, D IV) (ass)
Greatest breadth	(41.0)	35.0	33.0

PATELLA	(QN6-7) (horse)	(QN6, B III) (half-ass)	(QN2, 16 A I?) (ass)
Length (base-apex)	65.6	60.6	51.2
breadth	65.3	—	(50.8)
depth	31.7	26.0	23.1

TIBIA	(QN7, B I) (horse)	(QN16, I) (ass)
Distal breadth	70.0	(50.0)
distal depth	45.8	(33.5)

TALUS	(QN4, 2 S) (ass)
Greatest height	42.6
greatest breadth	44.3
breadth Facies articularis distalis	36.6

THIRD METATARSAL	(QN4, Va I) (horse)	(QN2, 18 II) (half-ass)	(QN2, 16 BS) (ass)	(QN4, III I) (ass)	(QN6, ES *sud*) (ass)
Greatest length	255.0	—	—	—	—
lateral length on the outer side (following Kiesewalter, 1888)	245.0	—	—	—	—
prox. breadth	47.5	—	—	—	—
prox. depth	41.7	—	—	—	—
distal breadth	47.5	(37.2)	33.5	(32.2)	33.8
distal depth	36.3	(30.5)	26.0	(25.5)	26.6
min. breadth shaft	31.2	—	—	(20.9)	—
min. depth shaft	23.8	19.7	—	(17.1)	—

FIRST PHALANX	(QN2, XXXI I) (? horse)	(QN4, III I) (ass)	(QN6, A II) (ass)	(QN6, D IV [1]) (ass)	(QN4, 1 S) (ass)	(QN6-7) (ass)	(QN6, ES *sud*) (ass)	(QN4, IX I) (ass)	(QN6, D IV [2]) (ass)	(QN7, B I) (ass)	(QN2, 14 A I) (ass)
	?	a	a	a	p	p	p	a	p	p	?
Greatest length	—	(70.5)	67.0	63.8	62.5	62.5	61.2	60.8	60.3	60.2	—
min. breadth shaft	—	—	21.2	22.6	21.7	23.0	22.3	22.0	22.3	22.7	—
prox. breadth	—	36.6	33.8	35.5	36.0	37.4	37.6	34.5	36.0	36.8	35.2
prox. depth	—	27.6	26.0	26.7	27.0	26.9	27.6	25.1	26.6	(25.8)	26.5
distal breadth	36.7	—	31.1	31.2	31.3	31.3	31.5	32.3	30.0	30.9	—

SECOND PHALANX	(QN6, D IV B) (horse)	(QN6, D IV [2]) (half-ass)	(QN6, D IV [1]) (ass)	(QN16, *sud* I S) (ass)	(QN4, IX I) (ass)	(QN4, 1 S) (ass)
	a	p	p	a	a	p
Greatest length	49.5	42.9	34.0	(33.0)	32.3	—
min. breadth shaft	45.5	35.9	27.5	—	30.2	28.5
prox. breadth	54.0	42.7	33.2	—	34.8	—
distal breadth	51.0	40.7	29.4	—	33.3	31.0

THIRD PHALANX	(QN16, I *sud*) (horse)	(QN6, D IV B) (half-ass)	(QN6, *sud*) (? half-ass)	(QN16, *sud* I S) (ass)	(QN4, IX I) (ass)	(QN6, D IV) (ass)
	a	p	?	a	a	p
Breadth	73.7	54.1	—	40.0	(39.0)	38.8
length	56.0	49.5	50.0	40.3	—	36.2
height	37.0	33.0	—	—	—	25.0

Measurements in brackets are approximate. a = anterior, p = posterior.

Vonones, Maues and Hermaios
The Imperial Coinage of Mithradates II

by K. WALTON DOBBINS

The history of the Indo-Iranian borderlands is shrouded behind a veil of silence and contradictions which could hardly be more difficult to penetrate if the peoples of ancient times had consciously conspired to confuse posterity. The literature dealing with the Hellenistic period of Baktria and India is a bewildering array of carefully conceived explanations, yet there is, on the whole, little agreement from one writer to the next regarding the most basic facts of chronology and geography. Despite this multiplicity of diverse views it is still possible to interpret the evidence from a new perspective.

This discussion takes up the story soon after the invasion of the lands south of the Oxus River by Scythian nomadic tribes from Central Asia in or soon after 130 B.C. These "barbarians" threatened the eastern borders of the Parthian Empire until Mithradates II (123-87 B.C.) conquered them and settled the several new peoples in his realm. The history of these tribes, and especially the evidence of their coinage, must be seen in the light of their introduction to sedentary, "civilized" life as subjects of the Parthians, who themselves had begun their role in history as an invading horde just over a hundred years earlier and had served a term as subjects of the Seleukid Empire.

At least three groups of Scythians can be identified from their coins (1). The "Vonones" group in Sakastan and Arachosia struck silver coins with the obverse device of King mounted holding couched lance, and Zeus standing with thunderbolt and sceptre on the reverse. This reverse device was most likely taken from the coins of Heliokles. The corresponding square bronze issues are the type "Herakles standing/Pallas Athena". The satraps of this group, Spalahora and his son Śpalagadama, are named on the reverse of the Vonones coins, and a bronze type with "King mounted/Herakles seated" names Spalyris (Śpalahora) in the Greek legend and his son on the reverse. The "Maues" group struck coins in Taxila and the provinces on the west bank of the Indus River. These coins are in a large variety of types in bronze, with "Zeus/Nike", "Helios and driver in two-horse chariot/Zeus enthroned" and "Tyche enthroned/Zeus Nikephoros" as the types in silver. The satraps of this region are named Liaka Kusuluka and his son Patika in the Taxila Copper Plate inscription. The third group is the "Hermaios" or "Pseudo-Hermaios" Scythians. This section of the newly settled invaders imitated coins of the Baktrian kings Hermaios, Eukratides and Apollodotos I in Kapisene and the Paropamisadai. The silver Hermaios imitations are of the "Bust/Zeus enthroned" type. The Eukratides imitations in bronze, round and square, have "Bust in helmet/Dioskouroi mounted"; one square issue has the god of Kāpiśī, *Kaviśiye-nagara-devata*, depicted and identified on the reverse; and another type has "Bust l. thrusting javelin/Dioskouroi mounted". The Apollodotos imitations are square bronzes of the type "Apollo/Tripod lebes". No Saka satraps of this group are known from the early period, but the Parthian satrap Tiravharṇa may have had jurisdiction over Kabul and Kāpiśī (1).

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(1) For the coins see P. Gardner, *Coins of the Greek and Scythic Kings of Bactria and India* (*BMC*), London, 1886; R.B. Whitehead, *Catalogue of Coins in the Punjab Museum, Lahore* (*PMC*), Oxford, 1914; V.A. Smith, *A Catalogue of Coins in the Indian Museum, Calcutta* (*IMC*), Oxford, 1906; and K.W. Dobbins, *EW*, XX, 1970, pp. 307 ff., for the imitation series.

The three groups of coins are characterized by the use of a Zeus device on the principal denominations. This deity is more precisely Zeus-Mithra, especially where the figure is radiate on the Hermaios and Vonones issues. Mithraism during the late Hellenistic age was a highly syncretic cult and adapted the majority of Greek and Semitic deities into its symbolism. Mithra was amalgamated into Apollo-Helios-Hermes. In particular, deities with Mithraic affinities found on the coins in question are these plus Herakles, the Dioskouroi, Poseidon, Artemis-Nanaia, Demeter-Tyche, Ardoxsho, Athena and sometimes Nike, as Mithra was the bearer of victory for his royal devotees. Also, the title *soter*, ʿsaviourʾ, expresses a dominant feature of Mithraic ideology (2).

The Vonones coins show Zeus, Herakles and Pallas; the Maues series has Zeus, Helios, Herakles, Poseidon, Apollo, Demeter, Artemis, and Ardoxsho (goddess with lamp). The imitation coins have Zeus, the Dioskouroi and Apollo; and Hermes is inherent in the theonym "Hermaios". The historical king Hermaios might have been a devotee of Mithra. His bronze issue shows "Bust in Phrygian cap with solar rays/Horse" (4).

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(1) Jalalabad inscription of Tiravharṇa, year 83: S. Konow, *Acta Orientalia*, XVI, 1938, pp. 234-40; H. Humbach, *Indo-Iranian Journal*, XI, 1969, pp. 29-33; G. Fussman, *BEFEO*, LVII, 1970, pp. 43-55.

(2) See J.M. Rosenfield, *Dynastic Arts of the Kushans*, Berkeley, 1967, pp. 85-90, 98, 196; J.R. Hinnells (ed.), *Mithraic Studies*, Manchester 1975, *passim*; L.A. Campbell, *Mithraic Iconography and Ideology*, Leiden, 1968, *passim*; M.J. Vermaseren, *Mithras, the Secret God*, London, 1963, pp. 106-16.

Elsewhere we have argued that the name Vonones is the Greek rendering of the name of the god Wanand (*wnnd*), ‘the destroyer of evil creatures’ or ‘victorious’, and is possibly cognate with OP **vanayant(a)* and Baktrian *oanindo*, ‘victorious’ (5). This epithet or reign-name was applied to Mithradates II after he defeated and settled the fearsome Scythians who were threatening the destruction of Parthia. The Great King of Kings Vonones of the coins is Mithradates, and his satrap's title, Just (Legal) Brother of the Great King, is a statement of personal loyalty between satrap and overlord. The appearance of Pallas Athena on the bronze issues may also be seen as an allusion to the conquest of the "barbarians" if this goddess is taken in her role as Gorgon-Slayer.

Similarly, the coinage of the Sakas in Kapisene was instituted by Mithradates II. But in this case neither the Arsakid overlord nor his Saka subject is alluded to directly in coin legends. The coins are faithful copies of Indo-Baktrian issues, with the god of Kāpiśī type as a variation on the Eukratides bronzes. This group of Sakas may have been under relatively close control of the Parthians, especially if their satrap was a Parthian, Tiravharṇa, rather than one of their own leaders as in the "Vonones" and "Maues" groups. Also, the cities of Kapisene and neighbouring provinces would have been more Greek in population and organization than those of Sakastan and Gandhara. The Parthians had already established policies for dealing with Greek cities in the midst of their non-Greek environment. Mithradates I and later Arsakids took upon themselves the role of protectors and patrons of their Greek subjects and adopted the title "Philhellene". The Greek cities were, for the most part, allowed to rule themselves.

The Scythians overthrew Greek kingdoms in Baktria and across the Hindu Kush. The Greek cities in these regions could well have regarded Mithradates as their deliverer from the barbarians and chaotic government. Thus, when Mithradates and his moneyers re-established the currency in the Kapisene region they took into consideration the Greek elements in the population as well as Mithraic symbolism. Continuity with the old, Greek political and economic order was maintained by imitating Greek coins rather than designing new types. Two of the types selected for imitation, Hermaios and Apollodotos, have the title *soter*, which can be a Mithraic usage. The other, Eukratides, has the title *megas*, which was first used in Parthia by Mithradates I, uncle of the present Mithradates and contemporary of the historical Eukratides Megas. There are Mithraic overtones in the name Hermaios, and the name Apollodotos has the same cult meaning as the name Mithradates — ‘gift of the sun-god’ or ‘given (dedicated) to the sun-god’.

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(4) See A.D.H. Bivar in *Mithraic Studies*, *cit.*, II, p. 279.

(5) Dobbins, *Antichthon*, VIII, 1974, p. 76.

The inclusion of the "Maues" group of Sakas in Mithradates' imperial settlement is more problematical, the major stumbling-block being the name Maues itself. This name is known from coins in the genitive case of its Greek form as MAYOY and of its Prakrit form in Kharoṣthī from coins as *Moasa* and from the Taxila Copper Plate inscription as *Mogasa.* The only known occurrence of this name outside the Taxila region is in Arrian where *Mauakes*, in the nominative case, is the name of the leader of the Saka contingent in Dareios' army at Gaugamela (6). Tarn takes "Maues" and "Mauakes" as being short and long spellings of the same name on the analogy of Phraates-Phraatakes (7). "Moga" of the inscription is probably the Prakrit for "Mauakes" rather than "Maues".

Mauakes was an ally of the Achaemenid king, not a subject, so he should be regarded as the king or chieftain of a Saka tribe. "Mauakes" may have been an ethnic name or dynastic reign-name on the analogy of "Arsakes" as used by the Parthians, but there is no direct evidence for this (8). The Parthians, however, fabricated a genealogical descent from the Achaemenids to give an appearance of legitimacy to their rule over Iran and justify rebellion against their Seleukid suzerains (9). Mithradates might have seen his own alliance and mastery over the Sakas of the Taxila region as a renewal or echo of the alliance between Dareios and Mauakes. Some evidence for a marriage alliance with the Sakas in Taxila can be seen in a tetradrachm of the "Tyche/Zeus Nikephoros" coins of Maues which names a Queen Machene (or Nachene) Theotropos in the Greek legend on the obverse (10). If Maues is a reign-name of the Parthian conqueror of the Sakas, Machene can only be Mithradates' queen. The title *theotropos*, ‘god-like’, was most certainly borrowed from the coins of Agathokleia and Strato where it was the only title applied to a queen in the Indo-Baktrian coinage. Machene, then, was a princess of the Saka tribe, perhaps from the family of Liaka Kusuluka, whose marriage to Mithradates cemented the political arrangement and was celebrated by an issue of coins.

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(6) Arrian, *Anab.*, III 8.3.

(7) W.W. Tarn, *The Greeks in Bactria and India*, New York, 1951, p. 496. The name of the king of Ta-yüan (Ferghana?) which F. Hirth, *JAOS*, XXXVII, 1937, pp. 112 f. and 145, gives as *Mu-kua* or *Mu-ku*, and cited by Tarn, pp. 308 and 496, and A.K. Narain, *The Indo-Greeks*, Oxford, 1957, p. 142, as the Chinese rendering of Maues-Moga in *Shih-chi* 123, and *Han shu* 70 and 96A, is transliterated by A. Wylie, *Journal of the Anthropological Institute* (*JAI*), X, 1881, pp. 45, 57 as *Wuh-kwa*, and by H.H. Dubs, *History of the Former Han Dynasty*, Baltimore, 1944, II, p. 132 as *Wu-kua.* It would seem that this is not necessarily a Chinese rendering of the name "Maues", nor is there any reason from the accounts to connect the king of the settled region of Ta-yüan with the nomadic Sakas.

(8) In the accounts of the Wu-sun, *Shih-chi* 123 calls their leader *K'un-mo* and *Han shu* 61 states that *k'un-mo* was a title and gives personal names to the Wu-sun leaders. Whether this designation was simply a title such as "king" or a dynastic reign-name like "Arsakes" is not clear. However, the story related by Chang Ch'ien about the infant K'un-mo being fed and protected by a black bird (raven?) and a she-wolf is probably a tribal-origin myth (see E.G. Pulleyblank, *BSOAS*, XXXIII, 1970, pp. 155 f.). The attribution of this story to the then ruling K'un-mo might have been due to confusion of his name-title with the name of the Wu-sun founder, in which case *K'un-mo* would be a dynastic name. Also, the legend has close affinities with the ancient Iranian legend cycle (see J.C. Coyajee, *Cults and Legends of Ancient Iran and China*, Bombay, 1936, pp. 18 f.). It may be argued that dynastic reign-names as distinguished from simple titles were common among the Iranian nomads of Central Asia.

(9) Syncellus 359. See J. Neusner, *Iranica Antiqua*, III, 1963, pp. 40 ff.

The Maues coinage is demonstrably contemporary with the early phase of the Pseudo-Hermaios series of imitations. The coinage of Apollodotos II at Taxila, which immediately follows the Maues issues, was interrupted in mid-series by an issue of Hermaios. Projecting back through the preceding years, the imitation coins of Kapisene which precede the Pseudo-Hermaios strikings in Gandhara and Taxila belong to the same decades as the Maues strikings in Taxila which precede Apollodotos II (11). Similarly, the Azes I coins which follow Hippostratos in Taxila project their Vonones-type predecessors in Sakastan and Arachosia back to the time of Maues and Pseudo-Hermaios; and, to give an even more precise chronology, Pseudo-Hermaios strikings interrupted the later coinage in Sakastan, dividing the Vonones issues, at about the same time as Apollodotos' coinage was interrupted in Taxila (12). Therefore, the Vonones, Maues and Pseudo-Hermaios issues were initiated at about the same time. The imperial title "king of kings" on the Vonones and Maues coins indicates that this could not be before 110 B.C. when Mithradates II adopted the old Achaemenid titulature. The first Hermaios series survived the Maues coinage and lasted almost as long as the Vonones series. So the shortest mintage of the three was that of the Maues group. Correlating the period of these coins with the reign of Mithradates gives 110 to 87 B.C. as the earliest and latest possible dates for "Maues" (13).

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(10) G. LeRider, *Revue des Etudes Grecques*, LXXX, 1967, p. 331. A.D.H. Bivar, *BSOAS*, XXXIX, 1976, p. 338, who gives the name of the queen as Māhēn, identifies her as the widow of Maues who tried to unify the Scythians after the king's death. The occurrence of the normal legend of Maues on the reverse of the tetradrachm suggests that he was not dead when the coin was struck, and the tetradrachm was probably the regular issue of the type corresponding to the drachms which name Maues in both legends and have the Kharoṣṭhī letters *dami* instead of the monogram.

(11) See Dobbins, *EW*, XX, 1970, pp. 310 ff.

(12) See G.K. Jenkins, *Journal of the Numismatic Society of India* (*JNSI*), XVII, pt. 2, 1955, 1-26; and Dobbins, *Journal of the Economic and Social History of the Orient* (*JESHO*), XIV, 1971, 294 f. As will be seen, the date of Spalirises on maps 5 and 6 of this latter paper must be revised to 58-55 B.C. (map 7).

(13) V.A. Smith, *ZDMG*, LX, 1906, pp. 57, 70, dated Maues to 120-90 B.C.

As Mithradates inherited the Scythian problem along with the Arsakid crown in 123/2 B.C., it seems reasonable that he did not adopt the "king of kings" title in 110 until after the Scythians had been completely subdued and settled, and that his victory over the invaders was one justification for the more prestigious designation. Since some preparations were needed for settling affairs in the East and elsewhere before the time was propitious for announcing the new style and political order, we should be justified in searching out a transitional coinage in the new Scythian dominions for the few years prior to 110 B.C. The most obvious choice in the Kāpisene region is the earliest issue of imitation Hermaios and Eukratides coins, which was struck before the introduction of imitation Apollodotos I bronzes in the second issue (14).

In the Taxila region, however, no Hermaios-Eukratides coins can be placed immediately before the Maues coins. Also, the coins with the simple legend ΒΑΣΙΛΕΩΣ ΜΑΥΟΥ (15) cannot be placed in the gap, because the adoption of the name-titles Maues and Vonones by Mithradates should not be before he initiated his new imperial system. One group of coins which has often been closely linked with the Maues coinage and may be considered as the transitional coinage here is the Telephos Euergetes issue (16). These rare coins differ from other Indo-Baktrian coins in several respects. The silver issue, known only in a drachm denomination, does not have the king's portrait; the title *euergetes/kalanakrama* (*kalyāṇakarma*) is unique in the coinage of Indo-Iranian regions; and the types found on these coins have no precedents in the designs of earlier Greek strikings. One device on the silver drachm shows a humanoid monster with serpent-like legs. Taken with the name Telephos this peculiar figure can be seen as an allusion to the myth of Telephos' battle with serpent-limbed monsters (17). Echidna, mother of Skythes the eponymous hero of the Scythians, is described as having serpent-legs. The depiction of Telephos' battle on the Pergamon frieze symbolizes the struggle between the Greeks and Gauls in Galicia, which was a fight for survival against marauding nomads similar to that of the Parthians against the plundering Scythians. Recalling the role of the god Wanand/Vonones as the destroyer of monsters and evil creatures, it becomes apparent that "Telephos" and "Vonones" are both references to Mithradates II's conquest of the fearsome Scythians. The title *euergetes* is found on coins of Mithradates in his last issue, in 88/7 B.C. In this same issue Mithradates used the title *dikaios* which was borrowed from Indo-Baktrian titulature and is seen in his satrap's title on the Vonones series (i.e. *dhramika*). The Telephos coins, then, are the transitional coinage in the Taxila region from about 115 to 110 B.C.; "Telephos" is Mithradates II.

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(14) See Dobbins, *EW*, 1970, pp. 314-6 and 325. This sequence is based on the series which shows the enthroned Zeus seated with feet close together.

(15) Elephant head/Caduceus (copied from Demetrios I of Baktria), *PMC*, pl. X 5; Horse/Bow-in-case (from Mithradates II himself), *PMC*, pl. X 35; and Apollo/Tripod, *PMC*, pl. X 18.

(16) Tarn, *op. cit.*, p. 497; Whitehead in *PMC*, p. 79-80n. See A.N. Lahiri, *Corpus of Indo-Greek Coins* (*CIGC*), Calcutta, 1965, pl. XXXII 13-15 for types.

(17) See Whitehead in J.H. Marshall, *Taxila*, Cambridge, 1951, II, p. 836; and A. Cunningham, *Coins of Alexander's Successors in the East*, London, 1884, pp. 296 ff. Telephos is the mythical founder of Pergamon, and the battle between the gods and snake-legged giants is depicted in the great frieze of the Pergamon altar, *c.* 180 B.C. (R. Lullies, *Greek Sculpture*, New York, 1960, pls. 251-59).

Another series of coins which are contemporary with the early Maues period are those with the name Artemidoros Aniketos (18). At least some of these coins were struck south of the Kabul River in the present provinces of Kohat and Kurram, at our Alpha and Sigma mints (19). The silver denominations of these issues are the type "Bust/Nike". The cursive form of the monogram on the Alpha mint issue indicates that it is later than an imitation Eukratides bronze with the same monogram (20). The Sigma mint issue precedes the Maues coinage west of the Indus. Another Artemidoros type in silver shows "Bust with or without helmet/Artemis shooting arrow". The monogram on these coins is not a monogram in the usual sense, but rather a cult or astrological symbol (21).

These coins can be seen as another variation on the theme of Mithraism which characterizes the coinage of Mithradates' settlement. The name Artemidoros, ‘dedicated to Artemis’, is the feminine counterpart of the name Apollodotos. The imitation Eukratides square bronze coin which precedes the Artemidoros issue at the Alpha mint is most likely contemporary with the first, transitional issue of imitations in Kapisene. This would date the initiation of the Artemidoros series without imperial titles to a date between about 115 and 110 B.C. The placing of these coins between the regions of the Pseudo-Hermaios and Maues groups further argues for identifying Artemidoros as part of Mithradates' new system. It would seem, then, that in Artemidoros Aniketos we should not see an independent Greek king but Mithradates himself. The coins are a variation on the imitation coinage assigned to Kapisene and Kabul; only in this case the name and types were not copied from earlier Greek issues but were new designs based on the idea of imitations. The province from which they were issued, the area bounded by the Indus on the east and the Khyber Pass and mountains to either side on the west, was perhaps organized as a buffer zone between the two groups of Scythians. If this area was such a zone and not inhabited by Sakas, the province might have been allotted to resident Greeks. Artemidoros is Mithradates again in his philhellenic role of patron and protector of Greeks and Greek culture.

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(18) Lahiri, *CIGC, cit.*, pls. X 7-9, XI 1-5.

(19) See Dobbins, *EW*, 1970, pp. 321-23.

(20) Id., *JESHO*, 1971, p. 293n.

(21) Lahiri, *CIGC, cit.*, pl. X 7-8. H. Shortt, *NumChr*, s. 7, III, 1963, p. 33, has suggested that this symbol belongs to the cult of Artemis.

After drawing the conclusions that Telephos and Artemidoros are pseudonyms of Mithradates II, it becomes incumbent upon us to take a fresh look at other so-called Indo-Greek kings of this time. The coins of Apollodotos II Megas Soter Philopator follow the issues of Maues in Taxila. We have argued elsewhere that the imitation Apollodotos I Soter bronzes in Kapisene were discontinued at about the time the Apollodotos II coinage began, and were issued again when the latter stopped and was succeeded by the Hippostratos Megas Soter *Jayaṁta* series (22). The title *philopator*, ‘devoted to one’s father’, is, like *euergetes* on the Telephos coins, new in the Indo-Baktrian series. This title was used by Gotarzes I Autokrator Philopator (96-86 B.C.), son, colleague and successor of Mithradates II, and his son Arsakes (?) Philopator Euergetes (*c.* 80-76 B.C.) (23). The chronological synchronization between the two usages of this title is too close to be merely coincidental. It can be argued that the Apollodotos II coins directly refer to Gotarzes or his son or both. The name was shifted from the Kapisene mints to Taxila and the Panjab for use on the new variety of imitation coinage. The reverse device on the Apollodotos II silver denominations is Athena Alkidemos copied from the coins of Menander, Strato, Polyxenos, Epander and one issue of Amyntas.

Pursuing this thesis further, the coinage of Hippostratos, ‘horse-soldier’, continues the Apollo symbolism in bronze and has “Zeus radiate enthroned holding wreath/Horse” on another bronze type (24). This horse device and the mounted light cavalryman on the silver issues from east of the Indus are references to the name, but in both cases the types can be seen as Arsakid symbols. The horse is a Mithraic symbol of the sun and is a device on Arsakid bronzes and the “Horse/Bow-in-case” bronze of Maues. The name and cavalryman devices are military references. The Parthian cataphractus, as depicted on the Vonones silver and some bronzes of Maues (25), was a decisive war machine in Mithradates’ conquest of the Scythians. The horseman on the Hippostratos coinage is not a cataphractus but rather of the Greek light cavalry type. But as the Greeks did not use the cataphractus, and the coinage was intended to be Greek, Hippostratos must be depicted as a Greek cavalryman. The King-on-prancing-horse device is like that on the coinage of Philoxenos (26). The Hippostratos coinage fills the period between Apollodotos II and Azes I in Taxila and must be dated between about 80 or later and 58 B.C. If these coins are an expression of Parthian influence and authority in Taxila, it might be better to link Hippostratos to Sinatroukes and Phraates III who displaced the line of Mithradates II.

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(22) Dobbins, *EW*, 1970, pp. 315 f.

(23) Dobbins, *NumChr*, s. 7, XV, 1975, pp. 41-43; Id., *Antichthon* 1974, pp. 68 f.

(24) Lahiri, *CIGC, cit.*, pl. XXII 5-6, 10-11.

(25) *Ibid.*, pls. XXII 8-9, XXIII 1-3 (Hippostratos); *PMC*, pl. XIV 374, 382, 394-5 (Vonones); *BMC*, pl. XVI 6, 8 (Maues).

The accompanying table illustrates the relative chronology of the Parthian kings and their Scythian coinage in four provinces from *c.* 115 to 58 B.C. The first two positions in the column on the left are the two phases of Mithradates II's conquest of the Scythians before and after he adopted the title "King of Kings" in 110 B.C. In the first phase no coinage has been identified for Sakastan. The imitation series was begun in Kapisene and Gandhara, but in the latter province the new pseudonymous Artemidoros coinage soon took the place of the imitations. East of the Indus River the pseudonymous Telephos coinage was issued in the first period after the conquest. In the second or "imperial" phase special status was given to the coinage in Sakastan and Taxila where new pseudonymous issues were struck with the imperial titulature, and that of Taxila soon replaced the Artemidoros mintage in Gandhara. The imitation coinage continued unchanged in Kapisene except for the addition of an Apollodotos bronze denomination.

Mithradates associated his son, Gotarzes I, into the government with his own coinage in 96 B.C. The Vonones coinage continued in Sakastan, but in Taxila the Maues coinage of Mithradates was succeeded by the Apollodotos coinage of Gotarzes in either 96 or 90 B.C. At the latter date Orodes I, brother of Mithradates and uncle of Gotarzes, rebelled in the Parthian Empire, and at about this time the imitation coinage spread to Gandhara. Orodes consolidated his control over Parthia in 86 B.C., and from this date the imitation coinage was struck in all the regions from Sakastan to Taxila.

In 80 B.C. Orodes was expelled from the empire by Arsakes, son of Gotarzes. The Vonones coinage was restored in Sakastan where the senior satrap was allowed a bronze type and his son was named on the reverse and on the Vonones coins. In Taxila and Gandhara the pseudonymous Appollodotos II coinage was reintroduced.

In 77 B.C. Sinatroukes, brother of Mithradates and Orodes, was restored to the Parthian Empire by the Sakaraukoi, and by about 75 B.C. Arsakes was finally expelled and imitations were again being struck in all the Scythian provinces. In Taxila, this phase is probably represented by one of the Eukratides bronzes, which are known from here in single- and double-monogram varieties, indicated under the earlier Hermaios phase.

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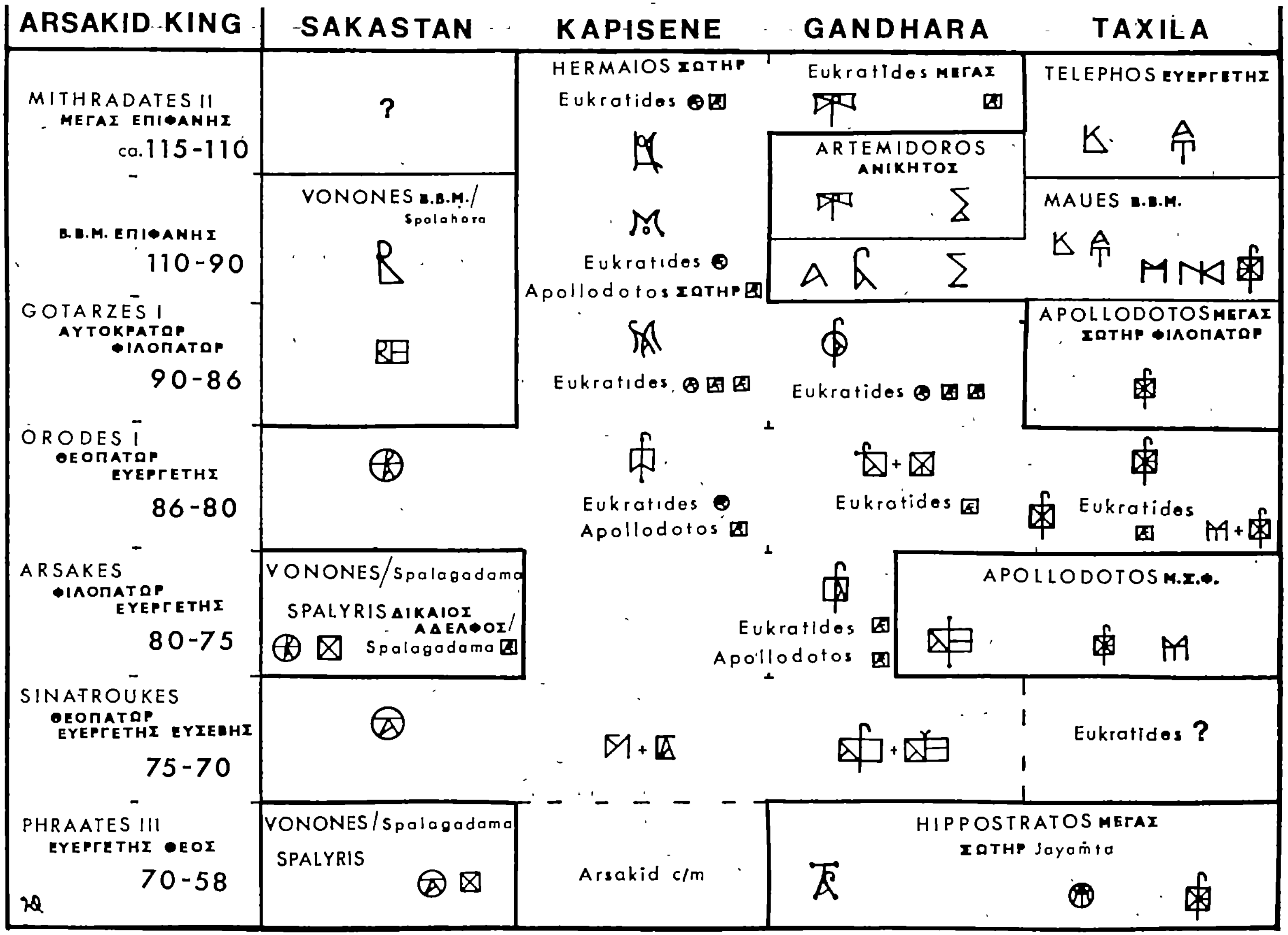
(26) Lahiri, *CIGC, cit.*, pl. XXVIII 1-7.


ARSAKID KING
SAKASTAN
KAPISENE
GANDHARA
TAXILA
MITHRADATES II
ΜΕΓΑΣ ΕΠΙΦΑΝΗΣ
ca.115-110
?
HERMAIOS ΣΩΤΗΡ
Eukratides
Eukratides ΜΕΓΑΣ
TELEPHOS ΕΥΕΡΓΕΤΗΣ
ARTEMIDOROS
ΑΝΙΚΗΤΟΣ
Β.Β.Μ. ΕΠΙΦΑΝΗΣ
110-90
VONONES Β.Β.Μ./
Spalahora
MAUES Β.Β.Μ.
Eukratides
Apollodotos ΣΩΤΗΡ
GOTARZES I
ΑΥΤΟΚΡΑΤΩΡ
ΦΙΛΟΠΑΤΩΡ
90-86
APOLLODOTOS ΜΕΓΑΣ
ΣΩΤΗΡ ΦΙΛΟΠΑΤΩΡ
Eukratides
Eukratides
ORODES I
ΘΕΟΠΑΤΩΡ
ΕΥΕΡΓΕΤΗΣ
86-80
Eukratides
Apollodotos
Eukratides
Eukratides
ARSAKES
ΦΙΛΟΠΑΤΩΡ
ΕΥΕΡΓΕΤΗΣ
80-75
VONONES/Spalagadama
SPALYRIS ΔΙΚΑΙΟΣ
ΑΔΕΛΦΟΣ/
Spalagadama
Eukratides
Apollodotos
APOLLODOTOS Μ.Σ.Φ.
SINATROUKES
ΘΕΟΠΑΤΩΡ
ΕΥΕΡΓΕΤΗΣ ΕΥΣΕΒΗΣ
75-70
Eukratides ?
PHRAATES III
ΕΥΕΡΓΕΤΗΣ ΘΕΟΣ
70-58
VONONES/Spalagadama
SPALYRIS
Arsakid c/m
HIPPOSTRATOS ΜΕΓΑΣ
ΣΩΤΗΡ Jayaṁta

Sinatroukes was succeeded by his son Phraates III who renewed the arrangement with the Vonones satraps, Spalyris and Spalagadama. In Kapisene the imitation coinage was supplemented or replaced by countermarked Arsakid drachms. In Gandhara and Taxila the pseudonymous Hippostratos coinage was introduced.

Imitation Hermaios coins are found with three distinctive styles in the reverse device. One shows Zeus seated on a throne with straight, double-ply legs with his feet close together. All the known monogram types of this style are noted in the table. This style spread to Gandhara in the 90-86 B.C. period and underwent some variation in the later phases there, and it is seen in Sakastan in the 86-80 B.C. period. Another style shows Zeus seated on a throne with plain straight legs and cross pieces with the end of his sceptre resting between his separated feet. The third style shows Zeus seated in the same feet-apart posture on a throne with ornamental curved legs. The monogram in the Kapisene column of the 110-90 B.C. period of the table is found on specimens of all three styles, and each style has its prototype in the genuine coinage of Hermaios. The pattern of styles and monograms allows them to be arranged as three parallel strains of design in three ateliers of Kapisene. During the 75-70 B.C. period the straight-throne-legs and feet-apart style is found in Sakastan.

The last so-called Greek kings are Dionysios, Zoilos II, Apollophanes, Strato II and Strato III (27) in the Panjab. All used the title *soter* and the device Athena Alkidemos on coins. Strato III is called the son of Strato and has the additional title of *priyapita*, the Prakrit equivalent of *philopator*. The corresponding portion of the often blundered or lost Greek legend on specimens of this issue have been alternately read as ΥΙΟΥ and ΚΑΙ ΦΙΛ (28), with no certainty claimed for either reading. Both could be expected as translations of terms in the Kharoṣṭhī legend on the reverse, *putrasa* and *casa priyapita*, and it may well be that both Greek versions were used on different dies. On these coins, then, the king is called Strato Soter Philopator, son of Strato. The portrait on the obverse is that of an old man seen on coins of Strato II alone. It appears from this that the coins of Strato III were struck during the lifetime of Strato II (29).

Here again we see the title *philopator* applied to a king ruling as the junior colleague of his father. The first such usage is found in the relationship between Mithradates II and Gotarzes I of Parthia. Another noted occurrence of an Arsakid king having associated his son in the government with his own coinage is that of Orodes II and his son Pakores I. In view of the conclusions drawn here identifying Greek names on late Indo-Baktrian coinage with Parthian kings, it is consistent to consider Strato II and Strato III as pseudonyms of Orodes II and Pakores I, respectively. These are the latest Greek names found on coins of this series. Orodes II (58-38 B.C.) began his rule as co-emperor with his brother, Mithradates III. The Panjab issues with the name Apollophanes should belong to Mithradates. The last Apollodotos issues, with the title *soter* and without *philopator,* belong to Arsakes, son of Gotarzes. This leaves the names Dionysios and Zoilos II to be assigned respectively to Sinatroukes and Phraates III.

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(27) *Ibid.*, pls. XIV 8-11 (Dionysios), XXXIII 9-14 (Zoilos II), IX 1-2 (Apollophanes), XXXII 8-12 (Strato II and III).

(28) See *PMC*, p. 81 n; M. Mitchiner, *Indo-Greek and Indo-Scythian Coinage*, London, 1975, III, 279.473; E.J. Rapson, in *Corolla Numismatica*, London, 1906, p. 255. *Putrasa* has sometimes been read as *potrasa*, 'grandson'.

(29) All the coins of Strato II alone have normal *sigma* in the Greek legend, and the joint issue shows lunate *sigma* as do coins of later kings in this class. Therefore, no coins of Strato III alone are known.

The reason these particular names were chosen as pseudonyms or reign-names of the Arsakid emperors can only be guessed. The first royal coinage east of Taxila is that of Apollodotos II, and we suggested above that this name was used because it is a cult epithet synonymous with "Mithradates". These coins set the pattern of Athena type, *soter* title and Greek nomenclature followed in this series. The name "Dionysios" for Sinatroukes is unprecedented in the Indo-Baktrian corpus of coinage. Its selection may have been inspired by the Dionysian legends connected with the Paropamisadai region. Dionysos was a deity known as the conqueror of the East (India), the sun god, Soter the saviour, and the Bull-headed or Bull-born. He is closely related in mythology with Apollo, and his imagery is familiar in the Mithraic cult. The theonym "Dionysios" could have been selected as an equivalent of the rival faction's cult pseudonym "Apollodotos". Phraates III's name "Zoilos" was taken from the Indo-Baktrian king Zoilos Dikaios for some historical reasoning now lost. Phraates was also referred to as Hippostratos, which was a name inspired probably by his martial exploits. In Parthia, Mithradates III revived the imperial "king of kings" title which had been in abeyance since 87 B.C., and thus he seems to have some ideological sympathies with the line of Mithradates II. His name on the Panjab coinage, Apollophanes, "Who makes Apollo manifest", recalls the cult name used by Gotarzes and his son, and the imitation Apollodotos I issues of Mithradates II. The name Strato has historical precedence in Strato I Soter Dikaios Epiphanes, and martial allusions in its meaning. "Strato" is also a component of "Hippostratos", so this epithet is associated with three successive Arsakids: Phraates III, Orodes II, Pakores I.

The issue following the joint coinage of Strato II and III is in the non-Greek name of Bhadrayaśa. This rare issue coincides with the beginning of the reign of Phraates IV from 38/7 B.C. It was followed by the coinage of Rajuvula, who is called *kṣatrapa* and *mahākṣatrapa.* "Rajuvula" is not a reign-name of a Parthian emperor, but the identity of Bhadrayaśa with Phraates IV is uncertain.

The Taxila Copper Plate inscription of Patika, son of the satrap Liaka Kusuluka, is dated 5 Panemos in the year 78 of the Great King, the Great Moga (30). We have argued that this date should be calculated in an era of 170 B.C. giving May 93 B.C. as the date of the inscription (31). Then we suggested that this era should be attributed to Eukratides who, as we are informed by Justin (32), began his career at the same time as his contemporary Mithradates I of Parthia (171-138/7 B.C.). In the light of the conclusion reached above that Maues, Moga of the inscription, is a pseudonym of Mithradates II, it seems more reasonable to interpret the era as one created by Mithradates II in honour of his illustrious uncle and namesake, Mithradates I. If the latter succeeded to the leadership of the Arsakids in 171 B.C., as is generally believed, and in the latter part of that year, his first full calendar year would have begun in 170 B.C. Assuming that Mithradates II introduced this era in his new territories, it should have been done as part of the imperial system established in 110 B.C. when he took the title "king of kings". In this case, there would be no epigraphs dated in this era with a year date lower than sixty — that is to say no inscription earlier than 110 B.C. would be dated according to this reckoning. This is the case for known inscriptions (33). We submit that this inscription is dated in an era calculated from the accession of Mithradates I and refers to Mithradates II as Maues and names the Saka satrap he designated to govern Taxila (34).

* * *

Before turning our attention to the Saka coinage of this region after 60 B.C., we would like to examine a passage from the *Han shu, ch.* 96A:

> Under emperor Wu (140-86 B.C.) there was for the first time intercourse with Chi-pin. Since (Chi-pin) regarded itself as extremely distant and inaccessible to the troops of Han, its ruler Wu-t'o-lao several times plundered and killed the envoys of Han. When Wu-t'o-lao had died, his son succeeded him on the throne, and he sent an envoy with

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(30) S. Konow, *CII*, II, pt. 1, pp. 28 f.

(31) Dobbins, *Journal of the Oriental Society of Australia* (*JOSA*), VII, 1970, p. 33.

(32) Justin, xli 6.1.

(33) The Maira inscription, Konow, *CII*, p. 11-3, cannot be confidently attributed to Maues or dated in the year 58.

(34) Orosius, *Hist. Ad. Pag.*, V 4.16, in his account of 141 B.C., says that Mithradates I: 1) defeated Demetrios, 2) conquered Babylon and invaded her territories, 3) subjugated all the tribes between the Hydaspes and Indus rivers and extended his bloody rule to India, 4) defeated and captured Demetrios in a second war. The reference to the conquests up to the Indus and in India is probably an anachronism and belongs to Mithradates II.

> tribute (to the Chinese court). The Han emperor sent the General Commander of the Passes Wen Chung to escort his envoy (to Chi-pin). Then the king again wanted to injure (Wen) Chung.
>
> When (Wen) Chung became aware of this, he conspired together with Yin-mo-fu, the son of the king of Jung-ch'u; they attacked Chi-pin and killed its king. He set up Yin-mo-fu as king of Chi-pin, and (the Han court?) granted him a seal and seal cord (confirming his investiture).

During the time of Emperor Hsiao-yüan (48-33 B.C.) Yin-mo-fu is said to have fettered an envoy and killed his assistant and subordinates and sent a letter to the emperor excusing himself. The same king or another of Chi-pin sent an embassy to Emperor Ch'eng in 25 B.C. (35).

The first knowledge of these events is after the time of Chang Ch'ien, the first envoy to the Western Regions, who visited the Ta Yüeh-chih in Ta-hsia in *c.* 130-29 B.C. Chang Ch'ien later sent assistant envoys to other western countries including An-hsi (Arsakids, i.e. Parthia) and Shen-tu (Sindhu, India) (36). It may have been some of these envoys, or others sent out during the five or ten years after the death of Chang Ch'ien in *c.* 115 B.C., who were ill treated in Chi-pin; but Chi-pin is not stated to have been the destination of either of these groups of embassies. Therefore, the visit of Wen Chung should be dated to a time after about 110. These events are placed after the migration of the Sai-wang (Saka-ruler) to Chi-pin in the *Han shu*, so the information about the country is during the period when it was under Saka rule.

"Yin-mo-fu" has been identified with the name "Hermaios" (37). If this linguistic equation is correct, the Hermaios mentioned can only be Pseudo-Hermaios of the imitation coinage. It seems to us that the only known name of this period and region which can be associated with Hermaios and rendered in the Chinese annals as Wu-t'o-lao is Vonones (ONΩNOY) or Wanand (38). Chi-pin was the name of different places at different times in Chinese literature and was finally identified with Kashmir. There is no agreement on the location of Chi-pin in the *Han shu*. If it was the kingdom of the Vonones coinage it was located in Sakastan, Arachosia or Paktyika (Gardez) or signifies all three. However, the coins of Chi-pin mentioned in the description of that country are said to show a face on one side and a man on a horse on the other. This description must refer to either the Hippostratos, Heraios or Soter Megas coins, and neither type was struck in the region of the Vonones issues. The kingdom of Jung-ch'u is mentioned only this once and is not described in a section of its own. Since Yin-mo-fu is called the son of the king *of* Jung-ch'u (in the translation), and the origin of his name, ΕΡΜΑΙΟΥ/*Heramayasa*, is the imitation coinage and does not indicate an actual person of that name, we will tentatively suggest that his "father" was King Jung-ch'u and that this latter name is also derived from the imitation coinage as a rendering of ΕΥΚΡΑΤΙΔΟΥ/*Evukratidasa.*

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(35) Quoted and summarized from E. Zürcher in A.L. Basham (ed.), *Papers on the Date of Kaniṣka* (*PDK*), Leiden, 1968, pp. 363 f.

(36) *SC* 123. See Zürcher in *PDK, cit.*, p. 361, and Watson, *op. cit.*, II, 273.

(37) Tarn, *op. cit.*, pp. 340 f.

(38) Wylie, *JAI* 1881, p. 36 n, suggested the Chinese text refers to the title *adelphou* on coins of Spalyris, Vonones' satrap.

In each case the Chinese literature is not referring to kings named Vonones, Hermaios or Eukratides but rather to Saka satraps who struck coins with those names for Mithradates II. Wu-t'o-lao/Vonones should be identified with Śpalahora, and the son who succeeded Wu-t'o-lao is Śpalagadama, son of Śpalahora. Imitation Hermaios issues are found to have been struck at a mint in Sakastan before and during the latest Vonones and Śpalagadama issue there. The intrusion of these strikings into the Vonones region seems to represent incursions of the Scythians in Kapisene and the Paropamisadai into the territory of the Saka satraps in Sakastan and Arachosia between about 85 and 70 B.C.

This interpretation of the *Han shu* passage on Chi-pin suggests that the Chinese got their information on the Far Western countries partly with the aid of coins, or from informants who themselves only half understood political events through the medium of coins (39). For even if the Chinese report came out a bit confused, our reconstruction of its meaning shows that it was based on factual information. As for the location of Chi-pin, we would like to suggest that in this early mention the name refers to Kāpiśī or the province Kapisene and was wrongly assigned to Wu-t'o-lao (Vonones), but had always been under Yin-mo-fu (Pseudo-Hermaios). But of course Kapisene had been subject to Mithradates II = Vonones.

The treatment of envoys and the receipt of tribute was a matter of great importance to the Han court and its historians (40). The oft repeated formula of a distant king who kills envoys and then sends tribute to the Han court as a sign of repentance is highly suspicious. The *Shih-chi, ch.* 123, relates that after Chang Ch'ien's successful embassy the position of official envoy became very lucrative, and the Chinese envoys abused their post to the extent that men of the foreign lands became disgusted with them. Reports of envoys who were ill treated often resulted in the despatch of an army to the offending land (41). We might assume that Wen Chung's report has been slightly coloured by his own ambition. A sure way to get a sympathetic hearing at court was to complain that a certain distant land had a reputation for diplomaticide and that the envoy had foiled a plot against himself. It is impossible to believe that Wen Chung actually conspired with Yin-mo-fu, helped him defeat the son of Wu-t'o-lao and then confirmed him in his new rule. His role in the affair is a fictitious sop for the Han court and is a variation on the theme of punishing barbarians who mistreated envoys of the Han: the Chinese official dutifully helped punish the offender and, of course, backed the winning side in a local dispute. We can, therefore, discount the parts about their total conquest of the other kingdom and killing its king, although these features are not necessarily contradicted by the evidence of coins. The episode of Yin-mo-fu's imprisoning the envoy Chao Te and killing members of his entourage, then sending a letter to the Han court, also was probably reported by an enterprising official. The tribute bearing embassy from Chi-pin in 25 B.C. seems to have been little more than a private mission of merchants.

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(39) *Han shu* 96A mentions the use of coins in four countries: Chi-pin and Wu-yeh-shan-li both used coins with a man's face or bust and a man on horseback; An-hsi's coins had a man's head and a woman's head (Phraatakes and Mousa?); and the Yüeh-chih country (Ta-hsia) had the same money as An-hsi, but this need not necessarily mean the same type as described for the latter.

(40) See Zürcher's comments, *PDK, cit.*, pp. 350 f.

(41) Watson, *op. cit.*, II, 276 f.

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In 58 B.C. Phraates III of Parthia was murdered by his sons Orodes II and Mithradates III, and after a fraternal war Orodes accepted the surrender of his brother and executed him in 55 B.C. Both Mithradates III and Orodes used the title "king of kings" which had not been used, except in one instance, since the death of Mithradates II. At about the same time in Sakastan, Azes I began issuing coins with the imperial title which had not been used, except on one striking, since the Vonones coinage had stopped. Azes I or one of his successors instituted an era based on his accession calculated from 58/7 B.C., which later became known in India as the Vikrama Era (42). The coincidence between the accessions of Orodes II and Azes I and the re-introduction of the imperial title on both their coinages becomes even more noteworthy when parallels with the story of Mithradates II and Maues, and Vonones, are considered. In the earlier events, a Parthian monarch established an era and coinage with pseudonyms for himself to be used by his Saka satraps. In the later time, an imperial coinage and era are initiated on the models of the earlier ones. To complete the analogy, the name-title "Azes" should be regarded as a pseudonym of Orodes II.

One point which has puzzled this writer for some time is that in the Mathura Lion Capital of Raju(vu)la and his son Soḍāsa dedicated to several Saka rulers, past and present, and all of Sakastan (i.e. Lands where Sakas live), no mention is made of a king named Azes (43). But the feminine form of the name is found as "Ayasia" in the name of Rajuvula's wife, and her father Kharahosta, who is called a satrap on coins, is given the title *yuvaraja* or junior monarch. The absence of the senior monarch's name or a reference to King Azes, so well known from coins, is rather peculiar. The name Azes/Aya/Aja, aside from coins, is known from three inscriptions where it is found in the dating formula. In two inscriptions there are no royal titles with it, while on the third it is not certain whether titles were originally at the beginning of the first line before *Ayasa*; the space seems to have been left blank (44). "Azes" is the name of the era in inscriptions and an honorific title on coins. It is not mentioned in the Lion Capital epigraph because there was no Saka king with that name. In fact, there was no Saka *king* at all (45).

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(42) See Dobbins, *JOSA* 1970, pp. 23-36, and Id., *Antichthon* 1974, p. 77. For coins of Mithradates III and Orodes II with the imperial title see D.G. Sellwood, *An Introduction to Parthian Coinage*, London, 1971, types 41/2-17 and 42.

(43) Konow, *CII*, pp. 30-49.

The so-called joint coinage which names Spalirises on the obverse and Azes (Aya) on the reverse (46) would seem to stand in the way of seeing "Azes" as simply an epithet. But *Azes*, which means ᶜcommanderᵓ or ᶜleaderᵓ, carries the same sense as *Spalirises/Śpaliriśa*, which means ᶜleading or directing the troopᵓ or ᶜacceptable to the troopᵓ; both words can be taken as a military command title. Similarly, *Azilises/Ayilisha* means ᶜdirecting the commandᵓ or ᶜacceptable to (as) the commanderᵓ, and is an expanded version of *Azes*. These titles were probably derived from *Spalyris/Śpalahora* which means the same as *Spalirises* but by a different etymology. "Śpalahora" was certainly the name or name-title of the satrap and does not refer to the king, his overlord, in the way that "Vonones" and "Maues" do. His official title was *maharajabhrata-dhramika*. His son's name, *Śpalagadama*, means ᶜthe most desired of the troopᵓ, or ᶜthe most desirable of (desired from among) the troopᵓ, i.e. ᶜthe best soldierᵓ (47). The use of this kind of title or honorific name was, therefore, common among the Sakas in Sakastan-Arachosia. To say that "Spalirises" and "Azes" were used in reference to the Parthian overlord and not the local, Saka ruler involves a difference in degree dependent on what appears to have been the current political system. We have already argued that the name "Mauakes" which belonged to a Saka chief in the time of Dareios III was later used as a reign name of a Parthian suzerain of Sakas in the forms "Maues" and "Moga". It is not difficult to see a similar transition from "Śpalahora" to "Spalirises" and "Azes".

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(44) *Ibid.*, pp. 16 f. (Shahdaur inscription of Śivarakshita, year 40?); pp. 70-77 (Silver Scroll, yr. 136); Marshall, *op. cit.*, I, 327 (Kalawan Copper Plate, yr. 134).

(45) The coins and inscriptions of the Sakas in Malwa, who were related to, if not identical with, the Maues and Vonones groups, have the titles Mahakshatrapa and Kshatrapa, not Maharaja. Yet they were fully independent. In the light of the conclusions reached here it seems that Saka use of the satrapal title was a tradition dating from Mithradates II's settlement and his confirmation of Liaka Kusuluka as satrap in Taxila and Śpalahora in Sakastan in *c.* 110 B.C.; and that the Sakas did not use a higher official title. The title Yuvaraja given to Kharahosta on the Lion Capital should be seen as an aberrant usage peculiar to the political situation of the day. It might have been an experiment to give greater dignity to the office of satrap, or distinguish a mahakshatrapa of different seniority in the clan, which did not gain popularity.

(46) *PMC*, pl. XIV 395-6; *BMÇ*, pl. XXIII 3-4.

(47) H.W. Bailey, *AIUON, sez. ling.*, I, 1959, pp. 130-32, and communication of January 1971.

If we identify Azes I with Orodes II, the Spalirises coinage which does not have the title "king of kings" will belong to the earlier part of Orodes' reign when his Parthian coinage also lacks the imperial titulature. On other coins (48) Spalirises is called "The Just Brother of the King" in the manner of Śpalahora's title. If "Spalirises" is a name-title and not the name of the Saka satrap, these issues must be regarded as transitional at a time when the emperor's honorific was also applied as a title for his satrap. The issue of Spalirises which does have the imperial title (49) may have been influenced by the brief mintage of Mithradates III. In fact, it might be correct to suggest that "Spalirises" specifically refers to Mithradates, and only "Azes" is Orodes' designation in the East. As the Azes I coinage belongs to Orodes II (58-38/7 B.C.), the Azes II issues belong to Phraates IV (38/7-3 B.C.). A link between the Azes II coin type KMW/ZN at Taxila and the Parthians is provided by a rare issue of this type in the name of Arsakes Dikaios *Tratara* (50). The devices, style and fabric of these coins are like the well known tetradrachms of Azes II, but the royal name is the dynastic reign-title of the Parthians. The coinage and epithet of Azilises should be allocated to Pakores I (*c.* 45-39 B.C.), the son and heir apparent of Orodes who was killed fighting the Romans. Such an attribution would be consistent with the later practice of appointing the heir of the Persian throne as viceroy in the East. Coins were struck for Pakores in Parthia with the imperial title, and it would not be too extreme to identify him with the King of Kings, the Great Azilises.

The Azes I coinage spread from Sakastan-Arachosia to Gandhara and Taxila where it replaced that of Hippostratos. Soon after this enlargement of territory covered by the Azes currency the reverse device of the silver denomination in Sakastan-Arachosia was changed from Zeus-Mithra to Ardoxsho (goddess with lamp) (51). There are no coins of this region which can be attributed to the Azes II period. Apparently direct Arsakid control was extended to Sakastan by Phraates IV, because the next indigenous coinage here, that of the Gondophares dynasty, is patterned on the Arsakid issues. The Azes II coinage steadily deteriorated into debased metal and crude design in Gandhara and Taxila until at the beginning of the 1st century A.D. it was being issued in vast quantity with virtually no metal of intrinsic value. At Taxila debased Azes II drachms (52) were issued to circulate with tetradrachms of Kujula Kadphises which were adapted from the Hermaios coinage (53).

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(48) *PMC*, pl. XIV 394; *BMC*, pl. XXII 1.

(49) *IMC*, pl. VIII 8; *BMC*, pl. XXII 2; *PMC*, pl. XIV 397. The reserve legend does not have the imperial title.

(50) R.G. Bartlett, *NumCbr*, s. 7, III, 1963, pl. XXII 3-4.

(51) Cf. *IMC*, pl. VIII 10, 12.

These latter coins are the last in the imitation Hermaios series. The imitation series in Kapisene was discontinued some time during the reign of Phraates III (70/69-58 B.C.) and replaced by counterstruck and imitation Arsakid drachms (54) which continued into the reign of Phraates IV. The imitation Hermaios coins re-appeared in Gandhara (55) during the early period of Azes II. Later, in the period of heavy debasement, imitation Hermaios coins were issued from the Alpha and Sigma mints of Gandhara (56). After these issues the imitation coinage was altered with changes in the legends and devices.

The first major change in the imitations is the issue of the so-called Heraos or Heraios. These coins, in good and debased metal, were designed after the Baktrian Greek coinage with Greek legend only. The tetradrachms are the type "Bust/King mounted with Nike flying behind", with the legend TYPANNOYNTOC HPAIOYKOÞANOY, and between the horse's legs extending into the right field and appearing to have been added to dies by a different hand is the word ΣAKAPOY. This legend is corrupted on most examples with "Sakarou" becoming "Sanabou" or "Sanab" (57). The drachms are the type "Bust/Mithra (?) standing" and a two word legend arranged on either side with letters missing off flan: (EP)MAIOY (KOÞ)ANOY and variants. On some specimens MIAOY is the corrupted remnant of the name Hermaios. On the tetradrachms the name is blundered by dropping E, interchanging P and M, and M taking the appearance of H. On some specimens the iota is omitted (58). The issuer of these coins substituted the title *tyrannos* for *soter* and calls himself a Kushan. This person must be Kujula, for on other coins of the imitation Hermaios variety issued by this prince the word ΣΩTHPOΣ is corrupted into ΣTHPOΣΣY. This corruption of the usual title on Hermaios coinage was probably caused by confusion between "soteros" and "tyrannountos" in the die cutter's design.

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(52) *PMC*, pl. XI 126.

(53) Bust/Herakles (*PMC*, pl. XVII 1, 8). Other variants on the Hermaios Sterossu issues of Kujula are drachms of different weights with reverse devices Zeus-Mithra enthroned (*PMC*, p. 84.676-80) and Nike (*PMC*, p. 85.682-92).

(54) Sellwood, *op. cit.*, types 91/9-11.

(55) Whitehead, *NumChr*, s. 5, III, 1923, pl. XVII 11; Jenkins, *JNSI* 1955, pl. IV 12.

(56) Lahiri, *CIGC*, *cit.*, pl. XXI 10, 11.

(57) Gardner, *BMC*, p. xlvii.

(58) *PMC*, pl. XVI 115, 117; A. Cunningham, *Coins of the Sakas*, London, 1890, pls. I 1-13 and IX 1-3.

The word "Sakarou" is to be identified with "Sakaraukoi", and its variations, of the Classical writers (59). *Sakaraukoi* means ‘ruler(s) of the Sakas’ (60), which is the same meaning as *Sai-wang*, ‘Saka king(s)’, of the *Han shu*. Justin, in his prologue to Trogus, refers to the destruction of the Sakaraukoi (Sacaraucae) by the Asiani kings of the Tocharoi (61). The Tocharoi are the Ta Yüeh-chih of Chinese sources which mention the defeat of the Sai-wang by the Yüeh-chih (62), and it is generally agreed that the Tocharoi/Yüeh-chih are the Kushans. These two sources both refer to the conquest of the Sakaraukoi by the Kushans. The Heraios coins apparently make the same claim, for the Kushan who calls himself Her(m)aios also calls himself *Sakaros*, ‘ruler of the Sakas’. The imitation Hermaios coinage was originally struck by Sakas or Sakaraukoi. When the Kushans under Kujula defeated and absorbed this group of Sakas, they adapted their coinage for their own use.

This reasoning maintains the distinction between the Sakaraukoi (Pseudo-Hermaios) and Sakas (Azes) from Sakastan-Arachosia. But this distinction may have been no deeper than an administrative division originally imposed by the Parthians on their Scythian vassals. Both groups, therefore, might correctly be called "Sakaraukoi". However, the pattern of coin mintage and intrusions of the imitation Hermaios coinage into mints of the Vonones-Azes group suggest the absence of a sense of unity between these tribes. An alternative explanation is that all along the people issuing the Hermaios imitations were the Tocharoi-Ta Yüeh-chih-Kushanas, and not Sakas. This would explain the statement in the *Han shu* that the money of the Yüeh-chih country was the same as that of An-hsi (Arsakids): the reference would belong to the decades when the Hermaios coinage was replaced by the countermarked Parthian coins. Or we may further differentiate between the imitation and the countermarked issues and assign the former to the Sakaraukoi and the latter to the Tocharoi/Yüeh-chih.

The last coins in the long series of imitation and pseudonymous coinage which began with Mithradates II are the Soter Megas issues (63). These coins were issued in an attempt to impose order on the chaotic monetary system of many different weight standards and types. When Phraates IV was murdered in *c.* 3 B.C. his Parthian satrap in Sakastan-Arachosia and Areia rebelled and initiated an independent coinage. This successful revolt separated the Sakas and Tocharoi of Kapisene and the Indus regions from their imperial Parthian masters. The Sakas continued striking Azes coins, the imitation coinage was re-introduced, and various satraps began issuing coins in their own names. Kujula gained control of the Taxila region and introduced still more new standards. The Parthians or Pahlavas from Sakastan-Arachosia then invaded the Gandhara region in a bid to re-establish Parthian hegemony over the Saka dominions, and their leader, Gondophares, succeeded in placing his name on some of the diverse types which had become current, but effective control remained in the hands of satraps such as Sasan, son of Aspavarma, who sometimes adopted the royal titulature. Gondophares probably tried to emulate the example of Mithradates II and Orodes II by introducing a new era to proclaim the renewal of the old Parthian imperial system. The only evidence for this is the so-called Takht-i-Bahi inscription which is dated in the year 103, belonging to the Azes era, and his 26th regnal year (64). But the rule of the Pahlavas in the region was too short for his era to gain popularity. The introduction of the Soter Megas coinage represents the stabilization of the political situation. This was probably accomplished by Vima Kadphises, who is closely associated with the Soter Megas coins (65). But it is probably wrong to think of Soter Megas as a particular king or person. This new imitation coinage might have been introduced before Vima established his ascendency.

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(59) Strabo, ii 8.2; and Justin, xli-xlii.
(60) Dobbins, *Antichthon* 1974, p. 77.
(61) Justin, prol. xlii.
(62) *HS* 61 and 96 B.
(63) *PMC*, pl. XVI 94, 96, 100, 109, 113.

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The identification of all the royal names on coins from the Indo-Iranian borderlands between *c.* 115 and 3 B.C. as pseudonyms of Parthian emperors shows that at least nominal Arsakid suzerainty extended into the Panjab during this period and that Taxila, Gandhara, Kapisene, Arachosia, and Sakastan were provinces of the empire. The interaction and juxtapositioning between different classes of the pseudonymous coinage show that while the vassal Scythian tribes associated with the various coin issues nominally owed allegiance to one overlord, they took sides with rival Arsakid factions and fought among themselves for their own interests. Orodes I does not seem to have introduced his own distinctive reign-title in the region. His Arsakid campaign coinage in Margiana, Traxiana and Areia may represent an effort to establish his control over the East. His interests seem to have been supported by the Pseudo-Hermaios group based in Kapisene who repeatedly intruded their imitation coinage into areas where we find the pseudonymous reign-titles of the Mithradates II line.

The pseudonyms can be divided into three catagories of origin and usage. Some names can be placed in two categories.

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(64) Konow, *CII*, pp. 57-62.

(65) One Soter Megas coin, *PMC*, pl. XVI 96, has the Kharoṣṭhī letters ***vamasa*** or *v(i)**masa*** at the end of the usual Soter Megas legend. Another small coin, A. Cunninghan, *Coins of the Kushans*, London, 1892, pl. XV 14, shows a head with two faces and the tamghas of Soter Megas and Vima to either side.

1) Names used as a mythological or historical reference: *Telephos* was adopted to define the mission of Mithradates in terms of the Telephos legend. *Eukratides* was the name of a contemporary of the first great Mithradates. *Maues/Mauakes* was the name of a Saka ally of an earlier Iranian king of kings. *Zoilos, Strato, Apollodotos I* and *Hermaios* were names of Indo-Baktrian kings before the Scythian invasion.

2) Names signifying a conqueror or military commander: *Telephos, Eukratides* and *Mauakes* were famous military leaders. *Vonones* is a conquering deity. *Hippostratos* and *Strato* are martial names. *Spalirises, Azes* and *Azilises* are Saka titles of command.

3) Mithraic cult names: *Artemidoros, Apollodotos* and *Apollophanes* signify dedication to a cult. *Hermaios* and *Dionysios* are theonyms. *Apollodotos* and *Hermaios* are also historical allusions.

In the following list of kings and the pseudonyms and coin types introduced by them Orodes I and Arsakes, son of Gotarzes, have no place. Orodes is perhaps to be associated with the Pseudo-Hermaios group, and Arsakes continued the Apollodotos II titulature introduced by his father. However, some of his coins are distinct in the omission of the title *philopator*.

King	*Historical*	*Military*	*Cult*
Mithradates II	Telephos	Vonones	Hermaios
	Eukratides		Apollodotos I
	Maues		Artemidoros
Gotarzes I			Apollodotos II
Sinatroukes			Dionysios
Phraates III	Zoilos II	Hippostratos	
Mithradates III		Spalirises	Apollophanes
Orodes II	Strato II	Azes I	
Pakores I	Strato III	Azilises	
Phraates IV		Azes II	

It should be noted that in the Azes I, Azilises, Azes II sequence the epithet Azilises was discontinued before the title Azes I, and that Azes II followed Azes I, not Azilises. This is necessary because Pakores I predeceased his father by about one year, and Orodes II (Azes I) was succeeded by Phraates IV (Azes II). The differentiation between the names "Azes" and "Azilises" was due to their being used simultaneously. In the Parthian coinage of Orodes and Pakores this distinction between co-emperors was effected in the portraiture. The coins of both have the imperial titles. The pattern of Kharoṣṭhī control marks on the obverse of Azes I and Azilises issues from Sakastan and Arachosia suggests that some Azilises tetradrachms were struck before some Azes I coins. The control mark and style of the joint Azilises/Azes tetradrachm (86) from the Gandhara Alpha mint show that this coin belongs at the beginning of the Azilises series, and is therefore a joint Azilises/Azes I striking. If the identification of these Saka name-titles with the Arsakid kings is correct, there can be no joint coinage of Azilises and Azes II. The Azes in question, regardless of which side of the coin carries the name, must always refer to Azes I.

* * *

The history of coinage in the Indo-Iranian borderlands from 110 B.C. to about A.D. 50 is the story of Parthia's sovereignty over the Scythian tribes which invaded the region in the latter part of the 2nd century B.C. and were pacified by Mithradates II. The conclusions reached here explain why there are no references or traditions of great Saka kingdoms in this territory even though there survives a corpus of magnificent coinage from these Scythian dominions. The coins represent more an extension of Arsakid hegemony than the legacy of a lately nomadic culture.

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(86) Cunningham, *Coins of the Sakas, cit.*, pl. VII.A2.

Bīr-kōṭ-ghuṇḍai (Swāt, Pakistan) 1978 Excavation Report

by GIORGIO STACUL

In Autumn 1978 the Italian Archaeological Mission resumed excavation work at Bīr-kōṭ-ghuṇḍai in the Swāt Valley, as part of the programme of the Centro Studi e Scavi Archeologici of IsMEO and with the collaboration of the University of Trieste.

Excavation was carried out in two areas (B and C) very close to the previously excavated one (Area A): Area B measures *c.* 42 sq.m. and Area C 14 sq.m. (fig. 1). The occupation layers and the cultural sequence showed some general features closely resembling those of the previous site (Stacul 1978).

Area B

The first occupation in the area rested on a very compact and clayey deposit which corresponds to the natural soil (layer ⑫) (fig. 2). On the floor level there were a large number of potsherds, mostly in a worn condition, and two terracotta human figurines (fig. 7.1, 2). On the eastern side of the area, layer ⑫ was cut in such a way as to frame a flight of steps cut in the slope (figs. 9, 10). At the bottom, on a step cut in the slope, two pits were dug in the clayey soil.

Pit 1. A shallow, circular pit with sloping sides and a flat bottom. Max. diam. 1.25 m., depth 0.35 m. The filling consisted of grey clay mixed with small, worn potsherds. At the bottom the fill was of discoloured clay subsoil.

Pit 2. A beehive-shaped pit, almost circular in plan. Main axis 1.40 m. at the top and 1.65 m. at the bottom, depth 0.53 m. The fill was comprised of two deposits, the upper one of clayey soil (layer ⑨) and the lower one of

(*) The excavation was directed by the author. Mr Aftab Ahmed Khan joined the Mission on behalf of the Department of Archaeology and Museums of the Pakistan Government. The drawings are by Mr Giusto Almerigogna and the photographs by the author. Both drawings and photographs are filed in the archives of the Museo Nazionale d'Arte Orientale in Rome.

ash mixed with potsherds. The typological features of the potsherds we recovered enabled us to connect the pit with the earliest occupation of the area.

Layer ⑩ showed the remains of two walls made of irregularly shaped stones and river pebbles, which had been built into layer ⑪. Wall *c* (in the NW corner of the area) is 0.45-0.50 m. wide and represents the northward extension of wall *c* in Area A (Stacul 1978: fig. 11). The eastern end of wall *b* rested on the slope of layer ⑫ (figs. 9, 10). On a reddish clay floor-level, at the base of layer ⑩, was a flat quern-stone and a large quantity of potsherds.

As in Area A, a thick, fairly loose deposit of light-brown clay divides this occupation phase from the following one, shown by layer ⑧.

Layer ⑧ consisted of dark-grey, very stony earth with ashes and charcoal remains. It was marked by a hard-packed clay floor, on which lay some almost complete pots (fig. 5.2-4) and two terracotta figurines (fig. 7.3,4). No walls appeared in the cutting.

Layer ⑦ was marked by a hard clayey floor on which were found potsherds and faunal remains.

Layer ⑥ consisted of light-brown earth with only a few potsherds.

Layer ⑤ showed remains of a solid walling 0.50-0.55 m. wide, built into layer ⑥ (fig. 8). Along the northern side there were four large slabs fixed into the soil, 1.40-1.60 m. from each other. The floor was a hard clayey soil mixed with pebbles and small slabs.

Area C

As in Area A (Stacul 1978: fig. 2), the excavated layers were likewise featureless.

Layer ⑪ showed the earliest occupation phase. A large area of burnt clay, which represents a hearth, rested on layer ⑫. Potsherds and faunal remains were recovered here, mixed with charcoal and ashes.

Layer ⑩ produced fragmentary indications of a wall made of irregularly shaped slabs and pebbles, almost 0.50 m. wide, built into layer ⑪ (wall *a*). On the reddish, hard clay floor-level, a large number of potsherds and faunal remains were recovered.

Layer ⑨ was a thick deposit of fairly loose clay, superimposed by layer ⑦, which was marked by a hard clay floor. On the floor was found a storage-jar and a large quantity of potsherds. This level and layer ⑨ which extended below it were cut by four almost circular pits (fig. 11).

Pit 1 was circular-oval in plan, with almost vertical sides and a flat bottom. Main axis 1.90 m., depth 1.10 m. The filling was black soil mixed with ashes and charcoal remains. At the bottom there were fragments of large pots.

Pit 2 was circular in plan, with slightly sloping sides and an irregular, flat base. Diam. 1.15 m., depth 0.75 m. The filling was grey clay with only a few potsherds.

Pit 3 was almost circular in plan, with vertical sides and a flat base. Diam. 0.95 m., depth 0.60 m. It was filled with uniform grey soil mixed with small stones.

Pit 4 lay on the NW edge of the area and only half of it has been excavated. Main axis 1.70 m. or more, depth 1.05 m. The lower filling consisted of black soil mixed with potsherds, charcoal and faunal remains.

The filling of layer ⑦ consisted of black or grey soil mixed with a large quantity of potsherds and faunal remains.

Layer ⑥ produced only a few potsherds.

Layer ⑤ showed no structural features but its floor was covered with charcoal remains and ash.

Layer ④ consisted of dark-grey earth with potsherds and faunal remains. As in Area A the floor was paved with small slabs and pebbles. Two almost complete pots rested on it (fig. 5.9,11).

FINDS

According to the stratigraphical sequence and the typology of the finds, the pottery and the other objects have been grouped in four assemblages: (I) from layers ⑪ and ⑩; (II) from layer ⑧; (III) from layers ⑦-⑤; (IV) from layer ④. With reference to the chronological sequence of Ghālīgai (Stacul 1969), the assemblages are ascribed to Period IV (I), to an intermediate phase between Period IV and Period V (II), to Period V (III) and to Period VII (IV).

(I) *Period IV*

Pottery. The best collection of pottery came from Area C, where the sherds were fresh, unworn and fairly large. On the contrary, a large part of the pottery from Area B, layer ⑪, consisted of small sherds with rolled edges (the same feature was observed in the same layer of Area A).

As in the previous excavation the main ranges of pottery are the following: (A) grey to brown gritty ware; (B) black to grey and buff ware, generally burnished; (C) Red, usually painted ware (black-on-red). Some sherds of soapy-grey painted ware (black-on-grey) were also recovered.

Including the pottery from Area A, the ratio is as follows: (A) 36%, (B) 44%, (C) 19%.

The gritty ware (A) is represented by globular or oval-shaped jars with rippled rim and disk-base (fig. 3.1,2). Out of a total of twenty-six fragments including the disk-base, which very probably belongs to this shape, mat- or basket-impressions on the outer surface have been observed on three specimens only, recovered in layer ⑪.

The burnished ware (B) include types such as the bowl on a conical pedestal (fig. 3.3), the deep bowl with sinuous profile and straight rim (fig. 3.4,5) and the large storage-jar with straight sides (fig. 3.6). The surface-colour is usually black or grey (less commonly buff), with both colours occurring sometimes on the same vase in a mottled surface. Some few sherds show on the inner surface traces of the fast wheel.

Red ware (C) is represented by such types as the bowl with flared sides on a conical pedestal (fig. 4.1,2,7), the small globular bowl with low conical pedestal (figs. 4.3; 18), the globular (?) vase with disk-base (fig. 4.13) and the large roll-rimmed storage-jar with flared sides (fig. 4.14). The majority of this ware shows traces of having been turned on the fast wheel.

A large quantity of potsherds of red ware are painted with black bands and sometimes with other motifs too. Simple horizontal bands, in groups from two to six, mostly occur on the body of the vases or on conical pedestals. Groups of slanting and wavy lines occur also on conical pedestals (figs. 4.10,11; 23).

As in the previous excavation, other painted motifs included floral and faunal representations (figs. 6; 12-17). We may distinguish the pipal tree (figs. 6.2; 17), different species of leaves (figs. 6.6-9; 15) and birds (figs. 6.3,4; 12-14). Stars (fig. 6.2,8) and a human-like figure near a disk-tipped cross (figs. 6.10; 16) are also represented.

On a potsherd of grey soapy ware we have a black-painted double-axe shaped leaf (?) (fig. 6.6).

Other decorations on red ware consist of cord-marked impressions, which mostly occur on fragments of bowls with flared sides (fig. 22).

Terracotta figurines. Two human terracotta figurines were recovered in layer ⑪:

— the upper part of a highly simplified, brown, female figurine with almost flattened body, slightly pointed arms, eyes and nose suggested by simple dots and with the dotted outline of a necklace on the breast and shoulders (fig. 7.1);

— a rough, brown female figurine with irregular, roundish body, dotted eyes and prominent breast (fig. 7.2).

Other clay artifacts. Other fired clay artifacts consisted of three biconical spindle-whorls, seven discoid potsherds with a central hole and fifteen plain discoid potsherds (fig. 31).

Stone artifacts. The stone artifacts include:

— a fragment of a schist mould with shapes of axe (?) and of another object on one side, from layer ❿ (fig. 7.15);

— two fragments of mace-heads or ring-stones, trapezoid in section with central hole;

— eight irregularly shaped disks of schist with central hole, from 0.06 to 0.09 m. in diameter;

— four irregularly shaped plain disks of schist, from 0.06 to 0.10 m. in diameter;

— ten discoid scrapers made from pebbles.

Bone artifacts. The bone artifacts include:

— a fine sharp polished point made from a piece of large bone, from layer ⑪ (fig. 7.9);

— a flat axe-like amulet with central hole and with red painted signs on one side, from layer ⑪ (fig. 7.7);

— a polished arrow-head round in section with cylindrical hole at the end, from layer ⑪ (fig. 7.8);

— two fragments of flat polished objects with roundish end, decorated with incised lines on both sides, from layer ⑪ (fig. 7.11,12);

— a fragment of polished pin with two flattened globules at the end and with incised crossed lines on the body, from layer ❿ (fig. 7.10);

— three fragments of polished pin, round in section;

— two narrow points made on metacarpal or metatarsal of sheep or goat;

— two flat points made from pieces of large long bones.

Metal artifacts. Three metal artifacts were recovered in layer ❿:

— a copper fish-hook (fig. 7.16);

— a fragment of flat copper wire;

— a very small fragment of thin gold plate.

"Faience" beads. The "faience" beads include:

— a quadrifoliate bead with four dotted incised circles at both sides and with transverse hole, from layer ⑪ (fig. 7.13);

— a cog-wheel shaped bead with central dotted circles at both sides and transverse hole (fig. 7.14);

— two very small discoid beads with central transverse hole.

(II) *Intermediate phase*

Pottery. As in the earliest occupation layers of the site, the pottery from layer ⑧ comprises (A) grey to brown gritty ware, (B) black-grey and buff burnished ware and (C) red or black-on-red painted ware. The other pottery consists of (D) grey-metallic ware, medium to fine in texture, sometimes turned on the fast wheel, and (E) brown medium-textured ware.

The selected shapes include:

— two buff-burnished bowls with shallow body, high carination and concave neck (figs. 5.1,2; 19);

— two grey-metallic carinated bowls with deep body, concave sides and disk-base (figs. 5.3,4; 21);

— two grey-metallic bowls with sinuous profile and almost straight rim (figs. 5.5,6; 20).

Grooved decoration occurs on grey-metallic ware (figs. 5.5; 20).

Terracotta figurines. Two terracotta figurines were recovered:

— a brown human figurine with flattened body, pointed arms, dotted outline of necklace on the breast and dotted concentric circles showing the sex (figs. 7.3; 28);

— a grey figurine with almost flattened body decorated with impressed circles, and with conical end (figs. 7.4; 26; 27).

Other clay artifacts. The other fired clay artifacts include a brown discoid spindle-whorl (fig. 7) and five grey and brown discoid potsherds with central hole.

Stone artifacts. The stone artifacts include two discoid scrapers made from pebbles and three irregularly shaped disks of schist with central hole.

Bone artifacts. They include a tubular object, oval in section, with incised lines on one end, and one narrow polished point made from an unidentified bone.

(III) *Period V*

Pottery. The main ranges of pottery from layers ⑦-⑤ comprise shapes on grey and red surface with thick sides (Silvi Antonini and Stacul 1972: p. 15). They include:

— a grey pot with almost globular body, straight rim and disk-base, from layer ⑦ (fig. 5.6);

— a grey cordoned vessel with sinuous profile, flared rim and disk-base, from layer ⑦ (fig. 5.9);

— a fragment of grey ware decorated with plain and dotted incised triangles (fig. 24);

— the upper part of a red jar with flared rim, from layer ⑥ (fig. 5.8);

— a grey miniature pot with sinuous profile and disk-base, from layer ⑤ (fig. 5.7).

Other clay artifacts. The other fired clay artifacts include:

— a brown biconical spindle-whorl with incised straight lines on the body, from layer ⑦ (fig. 7.6);

— Three grey and brown biconical spindle-whorls, from layers ⑦ and ⑥;

— a brown almost globular spindle-whorl, from layer ⑥;

— five grey and brown discoid potsherds with central hole, from layers ⑦ and ⑥.

Metal artifacts. The metal artifacts include three copper specimens:

— a point with quadrangular-sectioned body, from layer ⑦ (fig. 7.17);

— an incurved wire, circular in section with pointed ends, from layer ⑥ (fig. 31);

— three fragments of pins (?), circular in section, from layers ⑥ and ⑤.

(IV) *Period VII*

Pottery. The pottery includes red ware with thick and thin sides and a few pieces of fine grey ware. Selected shapes from layer ④:

— a grey miniature pot with deep body, slightly concave sides, low carination and curved bottom (fig. 5.11);

— a red carinated bowl with large mouth and with incurved and cordoned rim (fig. 5.12).

COMMENTARY

1. The earliest occupations of the site, ascribed to Period IV in the Ghāligai sequence (*c.* 1700-1400 B.C.), show two subsequent structural phases: an early one which is evidenced by pits cut in the natural soil, and a late one characterized by stone-walled rooms.

It seems remarkable that a similar subsequence of structural features, during Period IV, has been observed recently at Loebanr III too, where underground structures were superimposed by stone-walled constructions (Stacul, in this issue of *EW*).

Only a few typological differences have been noticed here between the pottery and the other finds of the two occupation periods. Both may be ascribed to Late Period IV, which is especially characterized by the red wheel-turned and painted ware.

As in the previous excavations, the black-on-red painted ware includes specimens decorated with faunal and floral representations, such as birds (figs. 6.1,3,4; 12-14), pipal leaves (figs. 6.2; 17), double-axe shaped leaves (?) (fig. 6.6, 7). The other motifs include stars (fig. 6.2, 8), spirals (fig. 6.5) and a human-like stylized figure near a disk-tipped cross (figs. 6.10; 16).

Some painted patterns such as the pipal leaves or tree recall somewhat the Harappan painting tradition. The representation of the pipal leaves in a group of three is mostly recorded on pottery from Cemetery R 37 at Harappa (Wheeler 1947: pl. XLVI 6) and from Mundigak IV (Casal 1961: fig. 65). The survival of the Harappan decoration pattern in this cultural complex has been already observed by the occurrence of the four-petalled rosette or intersecting-circle motif (Stacul 1978: figs. 7.6; 26).

Other designs may be compared rather with patterns of the so-called Culture of Cemetery H. We refer to the stars, the birds' heads like multi-rayed sun-motifs (fig. 6.3,4) (Vats 1940: Pl. LXVI, 82), the double-axe shaped leaves (fig. 6.5,6) (Vats 1940: Pl. LXVI, 86). The spiral motif (fig. 6.5) shows some affinities with a pattern common in the Bara assemblage (Purātattva 1971-72: fig. 10.17).

This assemblage includes also a singular representation consisting of a human-like figure near a disk-tipped cross (figs. 6.10; 16). The figure is composed of a vertical line, which corresponds to the body, connected with two sharp-cornered lines, corresponding to the arms. At the opposite sides, close to the arms, there are four or five vertical strokes indicating hands and fingers.

The above interpretation was suggested by the occurrence of similar human-like representations on pottery connected with the Ma-ch'ang stage of the Yang-shao culture in Northern China (Andersson 1943: pls. 190, 191), i.e. a stylistical horizon which was evidenced also in the Tarim basin in Sinkiang region (Bergman 1939; Andersson 1943: 279).

More evidence for the relation with Harappan peoples seems also to be provided by some types of beads recovered in layers ⑪ and ⑩.

We refer first to a quadrifoliate "faience" bead with four dot-centred circles (fig. 7.13), which may be compared with the trefoliate and quadrifoliate beads with dot-centred circles, common in the Indus Valley during the period of the Harappa Culture (Marshall 1931: Pl. CXLVI, 40; Jarrige and Lechevallier 1979: fig. 45.3). Another quadrifoliate bead, with five dot-centred circles, was recovered at this site in the previous excavation (Stacul 1978: figs. 9.2, 41).

We refer also to a cog-wheel shaped "faience" bead with dotted circles at the centre (fig. 7.14), similar to a star-shaped bone bead previously found at this site (Stacul 1978: figs. 9.1, 40). Both recall some painted patterns which are very common on jars and lids from Cemetery H (Vats 1940: Pl. LXIII.4, 12,14; Pl. LXIV.10; Pl. LXV.26-29).

2. Layer ⑧ produced evidence of a intermediate phase between periods IV and V. The pottery includes the main ranges of the recovered ware in the earliest occupation layers (gritty-brown, black-burnished and red-painted wares), as well as a new fabric (grey-metallic ware) which was especially evidenced in Period V.

Peculiar shapes of this phase are three types of bowl: the carinated bowl, the bowl with sinuous profile and the shallow open bowl.

The type of carinated bowl with concave sides is represented here by two specimens (figs. 5.3,4; 21), while another three specimens were recovered in the previous excavation (Stacul 1978: figs. 6.1-3; 17). The very sharp and pointed carination distinguished this shape from the carinated bowls common during the Period IV at Loebanr III (Stacul 1977: fig. 13.1-8). The same type shows also a marked difference in comparison to the grey carinated vessels common in the Early Period V, which are characterized by a deeper body and a narrower mouth (Silvi Antonini and Stacul 1972: Pl. XVIII a, b).

The type of bowl with sinuous profile is represented by two specimens of grey-metallic ware (figs. 5.5,6; 20). A similar shape has been recovered in layer ⑩ of the same area (fig. 3.4) as well as at Loebanr III (Stacul 1976: fig. 10 m) and at Aligrāma (Stacul and Tusa 1977: fig. 12 h). The grooved decoration on the body (fig. 5.5) is a decorative pattern which usually appears on the pottery of Period V.

The type of open bowl with shallow body and rim bent outwards, is represented by two buff-burnished specimens (fig. 5.1,2). They show some affinities with shapes from the Dashly complex in Northern Afghanistan (Sarianidi 1976: fig. 31.4) and from the Tulkar graveyard in the Bishken Valley, Southern Tadzhikistan (Mandelstam 1968: Pl. XIV 1-5), both ascribed to the second half of the 2nd millennium B.C.

In this cultural assemblage, of particular interest is a flat-shaped human figurine with the pointed outline of a necklace and pointed sex (figs. 7.3, 28). The flattened and very simplified body, as well the pointed necklace, seem to be derived from a model common during Period IV, which is noticed at this same site (figs. 7.1, 26).

As regards the flat-shaped human figurines in Central Asia, it was observed that « in contrast to Chalcolithic figurines, where there was an attempt at realistic modelling in the round, the figurines of the Bronze Age were flat and stylized, without any tridimensional modelling » (Masson and Sarianidi 1972: 129). It was also noticed that this new iconographic tradition, as well the connected ideology, spread from Northern Iran (Tepe Hissar, Tureng Tepe) to Southern Turkmenia (Altin-depe, Namazga-depe IV-V) and further to the east, together with the spreading of the black pottery (Ghirshman 1977: 36-38).

In the Swāt Valley the earliest bidimensional human figurines have been recovered at Loebanr III (Stacul 1977: fig. 20.1-6). They were generally found around the fire-places, associated with animal figurines representing the humped bull. As in other sites and cultures (Masson and Sarianidi 1972: 134), the bidimensional stylization was applied here only to the anthropomorphic representations, while the zoomorphic ones were shaped in the three-dimensional style.

3. As has been noticed in the previous report, the upper layers showed stone-walled structures and occupation layers ascribed to Middle-Late Period V and to Period VII.

Some shapes in grey ware with deep body and disk-base, from layer ⑦ (fig. 5.8-11), are characteristic of Middle Period V, as it is shown by the stratigraphical evidence of Aligrāma, where a similar assemblage of pottery has also been found on the same floor-level (Stacul 1979: figs. 47, 48).

The subsequent Period VI, evidenced in the nearby areas by sherds and other finds collected on the surface, is not represented at this site.

A very common shape of Period VII is the red carinated bowl recovered in layer ④ (fig. 5.13), which is almost identical with a type common in the graves of the same period (Silvi Antonini and Stacul 1972: Pl. VIII c). The finds here include iron objects.

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Loebanr III (Swāt, Pakistan)
1979 Excavation Report

by GIORGIO STACUL

In the autumn of 1979, the Italian Archaeological Mission resumed excavations at Loebanr III, as part of the programme of the Centro Studi e Scavi Archeologici of IsMEO and in collaboration with the University of Trieste. The main aim was to gain further evidence on the extent of the underground structures dug in the natural soil, that had come to light in the 1968 and 1976 campaigns (Stacul 1976; 1977).

Our previous investigations had shown that the main concentration of the pits was near the steep slope of the hill which rises above the Jāmbīl Valley and which has been described in the previous report. Excavation was therefore carried out in three different sites: in Area F on the northwestern side of the hill, in Area G half way along the northern boundary and in Area H on the northeastern side of the hill (fig. 1).

Area F

This area measured 12 x 4 m. The surface layer covered the natural soil in a large part of the trench. On this soil lay a rectangular stone knife (Inv. no. LIII 160). The only pit discovered was situated on the NE side of the trench near the slope of the hill (fig. 2).

Pit F1. A beehive-shaped pit, circular in plan and with a regular, flat bottom. Max. diam. 1.55 m. at the top and 1.75 m. at the bottom; depth 0.90 m. The filling consisted mostly of ashes with a few charcoal remains. A considerable number of animal bone fragments rested on the bottom, together with fragments of a large jar and an almost complete pot (Inv. no. LIII 161). The southern half of the pit was excavated.

(*) The excavation was directed by the author; Mr Muhammad Meherban was assigned to the Mission on behalf of the Government of Pakistan, Department of Archaeology and Museums. The drawings are by Mr Giusto Almerigogna and the photographs by the author. Both drawings and photographs are filed in the archives of the Museo Nazionale d'Arte Orientale, Rome.

Area G

This area measured 10 x 8 m. The topsoil, stirred by recent ploughing, was about 0.20-0.25 m. thick. The layer below, consisting of loose brown earth with very few potsherds, varied from 0.30 to 0.45 in thickness and covered a clayey deposit which corresponded to the natural soil. Three pits dug in this soil were excavated (fig. 3).

Pit G1. A shallow pit, oval in plan, with steep sides and a flat bottom. main axis 1.70 m.; depth 0.35 m. The northern edge was cut into by Pit G2 (see below) and a low step (0.05 m. high) connects the two floor levels. The filling consisted of dark-brown earth mixed with fragments of daub and a few potsherds. It extended into both pits, which were used contemporarily as a single structure.

Pit G2. A shallow pit, circular in plan, with steep sides and a flat bottom. Diam. 2.20 m.; depth 0.40 m. It cuts into the edge of Pit G1 (see above) and a low step connects the two floor-levels. The filling, which consisted of dark-brown earth mixed with fragments of daub, extended into both pits, which were both used contemporarily. On the bottom of the pit there lay a terracotta spindle-whorl (Inv. no. LIII 162), a terracotta lid (Inv. no. LIII 163) and a few potsherds.

Pit G3. A shallow pit, oval in plan, with a steep-sided profile and a regular, flat bottom. Main axis 2.80 m.; depth 0.40 m. The filling was a brown soil with fragments of daub and only a few potsherds.

Area H

The trench was irregular in outline, with the main axes measuring 13 m. and 8 m. The cultivated soil varied from 0.20 to 0.30 in thickness (layer ①). Below it extended a loose grey soil with small pebbles and a few potsherds, varying from 0.50 to 0.70 in thickness (layer ②), which covered a dark-brown earth mixed with stones and pebbles, containing potsherds and fragments of animal bones (layer ③). This layer showed an occupation phase with stone-walled structures (fig. 4) which were built into a thick deposit of loose light-brown earth (layer ④). Below it was the natural soil, in which were dug ten pits of different shapes and sizes (figs. 5, 6).

Pit H1. A shallow pit, almost elliptical in plan, with steep-sided profile and flat bottom. Main axis 3.20 m.; depth 0.30-0.40 m. It was probably composed of two circular pits intersecting one another that were used contemporarily as a single structural complex. The filling consisted of two deposits. The upper one was composed mostly of stones and pebbles which seem to have been heaped up in the pit (fig. 12). The lower one was a hard, dark-brown earth containing fragments of daub and potsherds. Holes and post-holes could be seen around the structure (fig. 13).

Pit H2. A beehive-shaped pit, circular in plan, with slightly sloping bottom. Diam. 1.80 m. at the top and 2.10 m. at the bottom; depth 1.10 m. The filling consisted of two deposits. The upper one was a hard-baked clay mixed with ashes and charcoal remains. Residual of copper smelting and a copper chisel (Inv. no LIII 176) were found here. The lower deposit was made up mostly of ashes and a few charcoal remains. On the bottom there lay a terracotta animal figurine (Inv. no. LIII 171) and a bone point (Inv. no. LIII 177).

Pit H3. A large shallow pit with steep sides and a regular, flat bottom. Max. diam. 2.65 m.; depth 0.80 m. The fill consisted of a grey soil with small stones and fragments of daub. On the bottom there rested an almost complete jar (Inv. no. LIII 169). The western side of the structure was intersected by Pit H4 (see below). The filling of the two pits showed a common, contemporary use.

Pit H4. A circular, beehive-shaped pit with a regular, flat bottom. Diam. 1.80 at the top and 1.95 at the bottom; depth 1.10 m. It intersected the edge of Pit H3 (see above). The upper fill consisted of a grey soil and fragments of daub. The lower one was a thick layer of ashes and charcoal remains which suggested the occurrence of a fireplace. On the bottom, close to the walls, the lower parts of two jars were found *in situ*; nearby rested a granite quern (fig. 11). A terracotta animal figurine (Inv. no. LIII 173) and part of a bowl with an incised pot-mark (Inv. no. LIII 181) lay around the fire-place.

Pit H5. A circular, very shallow pit with steep sides and a flat bottom. Diam. 1.40 m.; depth 0.30 m. The filling was a light-brown loamy soil.

Pit H6. Circular in plan, with a steep-sided profile and flat bottom. Diam. 1.80 m.; depth 0.70 m. The filling consisted of grey earth and fragments of daub. A light-brown loamy soil covered the bottom. The pit intersected the edge of Pit H7 (see below). Both pits were used contemporarily as a single structure.

Pit H7. Circular in plan, with steep sides and a flat bottom. Diam. 1.50 m.; depth 0.75 m. The upper filling consisted mostly of stones, pebbles and fragments of daub. The lower one was a dark-grey soil with ashes and charcoal remains which were concentrated mainly on the bottom and suggested a fire-place. Around the fire-place rested a terracotta animal figurine (Inv. no. LIII 172), two terracotta spindle-whorls (Inv. nos. LIII 174 and LIII 175) and a potsherd with a graffito animal figure (Inv. no. LIII 170). The southern edge of the pit was intersected by Pit H6 (see above) and a low step connected the two floor-levels. The fill shows that both pits were used contemporarily as a single structure.

Pit H8. A circular (?), very shallow pit with steep sides and a flat bottom. Depth 0.30 m. The filling consisted of a light-brown loamy soil. Only the eastern side of the structure was excavated.

Pit H9. A circular (?) pit with a steep-sided profile and flat bottom. Main axis 2.20 m.; depth 0.75 m. The filling consisted of grey earth mixed with stones and pebbles. Only a few potsherds rested on the bottom. The pit was excavated on its southern side.

Pit H10. The pit was situated in the SE corner of the area. It was not excavated.

Post-holes

Many of the small hollows around the pits can be interpreted as post-holes. Most of them were practically circular with roughly steep sides. Their diameter varied from 0.15 to 0.25 m. and their depth from 0.10 to 0.30 m. Their filling was generally a dark soil. A structural pattern could be distinguished around Pit H1 only (fig. 13), where most of the holes occur at a distance of 0.20-0.40 m. from the edge of the pit.

Stone-walled structures

The late occupation phase of the site is evidenced by two walls made of large slabs of schist and pebbles, joined with mud, with their foundations dug into layer ④. The walls were preserved up to a height of 0.25-0.35 m. and enclose a square room with a hard clay floor (fig. 4). An almost circular area of burnt clay and ashes near the corner formed by the two walls suggested a fireplace. On the floor-level rested potsherds and two terracotta spindle-whorls (Inv. nos. LIII 165 and LIII 167).

A circle made of small stones and pebbles (diam. 0.50 m.) lay south of the room. It was filled with light-brown clayey earth.

Pottery

The pottery finds display the same technological features as those described in previous reports, namely:

(A) Brown to Grey Gritty Ware. Hard clay, with sand and other tempering materials. Coarse to sandy on the outer surfaces. The thickness of the walls varies from 5 to 10 mm. It is turned on a slow wheel.

(B) Black-Grey and Buff Ware. Hard clay, medium to fine in texture. It is generally burnished and often has a mottled surface. Burnishing occurs on the outer and sometimes also on the inner surface. In some specimens the highly lustrous surfaces could have been achieved by turning. Average thickness is about 4 to 10 mm. It is turned on a slow wheel, with only some rare specimens being turned on a fast wheel.

(C) Red Ware. A large part of this ware is made of a hard clay, fine to very fine in texture. A small part is porous and friable. The thickness of the walls varies from 4 to 10 mm. It is generally turned on a fast wheel.

(D) Brown Ware. The clay contains sand and other tempering materials. The surfaces are coarse. Average thickness is about 6 to 10 mm. It is handmade.

More than 90% of the sherds which come from the pits consist of Brown to Grey Gritty Ware and Black-Grey Burnished Ware, the latter being slightly prevalent, while only 4% is represented by Red Ware.

A different ratio was found in layers ④ and ③ of Area H, which revealed a late occupation phase of the site. Here the Red Ware represented 15% of the pottery, in comparison to the 43% of Black-Grey Ware and the 37% of Gritty Ware.

Shapes

The pottery shapes from the pits are the following:

— large jar (A) with ovoid body, flared rim and disk-base (figs. 7.8, 17);
— very large wide-mouthed jar (B) with slightly flared rim (fig. 7.10);
— conical, hollow pedestal (B) (fig. 7.5);
— small bowl (B) on low, conical, hollow pedestal (fig. 7.7);
— ovoid bottle (B) with high cylindrical neck and disk-base (fig. 7.4);
— bowl (B) with almost vertical sides, curved bottom and disk-base (fig. 7.3);
— hemispherical bowl (B) with flat bottom (fig. 7.9);
— bowl (C) with flared sides and disk-base (fig. 8.1);
— open bowl (C) with shallow body, flanged rim and flat base (fig. 8.4).

Shapes from the upper layers of Area H:

— large jar (B) with globular or ovoid body and short flared rim (fig. 7.1,2);
— bowl (C) with flared sides and flat base (fig. 8.2,3,8);
— narrow-mouthed jar (C) with globular body and high, flared neck (fig. 8.7);
— large-mouthed carinated bowl (C) (fig. 8.11).

Decorations

The Gritty Ware (A) is generally characterized by rippled or notched rims and by mat- or basket-impressions on the base.

The Black-Grey Burnished Ware (B) is generally a plain ware. Cordoned decoration consisting of a single cordon occurs on very few specimens only (fig. 7.4).

The Red Ware (C) is frequently decorated with black painted horizontal bands or with cord-marked impressions. Incised pot-marks (figs. 8.4,6; 18) and graffiti figures (fig. 8.5) are evidenced here for the first time.

Other Finds

Terracotta, stone, bone and metal objects include:

— three brown terracotta figurines representing the humped bull (figs. 9.1; 16);

— a fragment of a brown terracotta spoon (fig. 9.3);

— a brown bobbin (?) with roughly concave sides (fig. 9.4);

— a brown terracotta spindle-whorl with concave faces and with pointed decoration (fig. 9.5);

— a brown terracotta cylindrical spindle-whorl (fig. 9.7);

— two grey biconical terracotta spindle-whorls (fig. 9.6);

— a rectangular-shaped stone knife with polished surfaces and with a holed edge (figs. 9.12; 19);

— two flattened bone points (fig. 9.9,10);

— a fragment of a flattened bone polished object with incised decoration on one side (fig. 9.8);

— a goat horn with polished point;

— a copper chisel, round in section with flattened point (fig. 9.11).

The specimens in fig. 9.1-4,6,8,9 were recovered in the pits; those in fig. 9.5,7,10-12 came from the upper layers.

Commentary

1. The resumption of work at Loebanr III, yielded new evidence on the underground structures which had come to light in previous years and which were ascribed to Period IV in the Ghāligai sequence (*c.* 1700-1400 B.C.).

The situation of the pits varied according to the physical features of the site. The main settled area lies very close to the steep slope of the hill overlooking the Jāmbīl Valley. Three main groups of structures were discovered here: in areas A, AA and H. Only a few shallow pits appeared in the internal terraces of the flat top of the hill, where the surface layer covers the natural soil.

The pits showed a considerable variation in plan and cross-section and were certainly dug for different purposes. Including the areas excavated in the previous years, it is possible to distinguish the following types of structures:

— circular/oval, shallow pit, with steep profile (Pits A3, A7, A8, G3, H5);

— circular pit with concave edges, where the depth exceeds the diameter (Pit A1);

— beehive-shaped pit (Pits A4, F1, H2);

— very large and shallow pit, almost oval in plan, with steep sides (Hut A);

— composite structure consisting of two connected circular/oval pits with bottom at the same ground-level (Pit H1) or at different levels connected by a step (Pits AA1 and AA2, A2 and A5, G1 and G2, H3 and H4, H6 and H7).

The composite structure made of two connected circular/oval pits, used contemporarily as a common structural complex, was mainly evidenced during the last excavations, in areas G and H, where it was possible to notice two varieties of shape.

The simplest one was almost ellipsoidal in plan with a regular flat bottom (Pit H1). Post-holes surrounding the whole pit have been observed.

A variety of this shape was represented by a structure consisting of two connected pits of different size, where the floor-level of the smaller one was slightly higher in comparison to that of the other pit (Pits G1-G2, H3-H4, H6-H7). The different floor-levels were connected by a step. In two of these structures the smaller pit had been used as a fire-place (Pits H4, H7).

A similar composite structure came to the light in Area AA (Pits AA1-AA2). It consisted of a very large, almost oval pit connected with a smaller circular one. Here also the bottom of the smaller pit was higher than the other and the different floor-levels were connected by a step.

Also the beehive-shaped structures were mainly evidenced during the last excavation. All these pits, very similar in size and in profile, were situated on the border of the steep slope of the hill and their lower filling always consisted of ashes. During a late occupation of the site one of these pits was probably used for copper casting (Pit H2).

2. Around the fire-places, on the bottom of Pit H4 and Pit H7, have been found *in situ* some cooking pots and a stone quern. In the same places, mixed with ashes, have been recovered two terracotta figurines representing the humped bull and a potsherd with a graffito figure of the same animal. Also in the previous excavation, the majority of the animal figurines, all representing the humped bull, were found around the fire-places, as well as some human terracotta figurines (Stacul 1977).

On the basis of this evidence, we may suppose the performance of some cult ceremony around the fire-places. We may also suppose that a cultic meaning was attached to the representations of the humped bull, fourteen figurines of which have so far been recovered in various pits (no other species of animals were represented here or in other sites ascribed to the same cultural period).

3. The rectangular-shaped, perforated, stone knife (figs. 9.12, 19), represents a new type of artifact in the cultural complex of Loebanr III.

Rectangular- and crescent-shaped knives made of stone or bone, generally with two holes, have been recovered in a great quantity in the neolithic layers of Burzahom, in the Kashmir Valley, where the occurrence of similar objects, as well as other evidence, suggested an influence from Northern China in the first half of the 2nd millennium B.C. (Thapar 1965; Gupta 1979: 217). The perforated knives are a diagnostic artifact of the neolithic cultures in Northern China: the rectangular-shaped type is mostly evidenced from Kansu to Honan, in the area of the Yang-shao culture, while the crescent-shaped type occurs from Honan to Shantung, in the area of the Lung-shan culture (Watson 1970: 26, 27). According to various scholars these artifacts were mostly used for weeding, harvesting, skinning and scraping (Chang 1963: 66), as is also shown by ethnographic parallels (Andersson 1943: 270).

We may suppose that the occurrence of a similar object in the cultural context of Loebanr III can be explained as a result of relations between Kashmir and Swāt during the second quarter of the 2nd millennium B.C., which seem evidenced by some close affinities in the pottery fabrics and shapes (Stacul 1973: 83-85; Gupta 1979: 216). However, there is further evidence, in the same cultural context of the Swāt Valley, which also suggests direct relations with Northern China. We refer to various objects, such as a holed axe (Stacul 1979: fig. 10), two miniature holed axes or amulets (Stacul 1978: fig. 35; Stacul, this issue of *EW*: fig. 7.7), a bone pin with the head shaped like a tao'tieh mask (Stacul 1979: fig. 16), a comma shaped pendant of light-green jade (Stacul 1979: fig. 11) and other jade beads.

On the basis of this evidence we may infer that before the middle of the 2nd millennium B.C. more than one route connected Northern China with the northernmost valleys of the Indo-Pakistan subcontinent and that different links interwisted these valleys between and with transhimalayan cultures.

4. A change in the settlement pattern occurred around the end of the occupation period of the site, when the pit-dwellings were abandoned and sealed. In areas A and H we found remains of stone-walled structures made of schist slabs and pebbles, joined with mud, which were built over the pits.

A similar sequence of structural phases, during Period IV, has been observed at Bīr-kōṭ-ghuṇḍai too (Stacul, this issue of *EW*).

It seems remarkable to notice that at about the same time, around the middle of the 2nd millennium B.C., a change in the settlement pattern occurred also at Burzahom, in the Kashmir Valley, where the pit-dwellings were abandoned and rectangular houses and platforms were built over them (Pande 1970: 28; Bala 1978: 3; Gupta 1979: 36).

The excavation of Area H yielded the main evidence on the late occupation phase of the site, shown by stone-walled structures. Here, also, it was possible to observe some typological differences between the pottery of the two subsequent phases.

First, it may be noticed that the red and black-on-red painted pottery represents 4 per cent of the total collection in the early occupation phase (it was about 3 per cent in the previous excavations of the site), in comparison to 15 per cent in the late occupation layers above the pits in Area H.

Secondly, there are also some differences between the shapes in the two subsequent phases. The pottery ascribed to the first occupation includes a large variety of shapes similar to those recovered in Area A (Stacul 1977). We refer to types such as the ovoid jar (A) with flared rim (fig. 7.8), the bowl (B) with flared sides (fig. 7.9), the bowl (B) with slanting sides (fig. 7.3), the bowl-on-stand (B) (fig. 7.5,7) and the cordoned bottle (B) with a high neck (fig. 7.4). Some different shapes appear in the late occupation phase, such as the jar (B) with a short, flared rim (fig. 7.1,2), the jar (C) with a trumpet-shaped mouth (fig. 8.9) and the large carinated bowl (C) (fig. 8.11). It may also be remarked that in this last period the pottery with mat- or basket-impressions on the base almost completely disappears.

On the whole the main change in the pottery, during the late Period IV, is shown by the increase of the red wheel-turned ware, which is characterized, at Bīr-kōṭ-ghuṇḍai in particular, by various new shapes and also by floral and faunal painted representations. These new features could be probably be explained as a result of a southern influence (from the Gandhāra plain?), as is suggested by the occurrence of some wheel-turned shapes in red ware which have no comparison in the local fabrics, as well as by the appearance of a well-developed style in the painted decoration. Some of these new features had already appeared in the Early Period IV.

Therefore we may suppose that the same people that introduced the fast wheel, as well as new decoration motifs on the pottery, may be ascribed with the change in the settlement pattern, according to the traditions of the great alluvial plains.

In any case we must remark that the change in the pattern of residence, evidenced at Loebanr III and Bīr-kōṭ-ghuṇḍai at the end of Period IV (c. 1500/1400 B.C.), basically reflects the great cultural change which started at the beginning of the same period (c. 1800/1700 B.C.), with the spreading of the black-burnished pottery, of the polished stone and bone tools as well as of metallurgy. This period very probably corresponds to an increase in population density and in the size of the residence groups, as it is shown by the archaeological evidence on the earliest settlements in the open valley that have been discovered so far (Loebanr III, Bīr-kōṭ-ghuṇḍai, Aligrāma). The growth of settled life may be connected with the evolution of agricultural activities, shown by the various kinds of seeds recovered at Loebanr III (wheat, barley, rye, rice, lentils, peas, grapes). Multi-directional and long-distance contacts are noticed by some new kinds of pottery and artifacts connected with cultures of the Indus Valley, Northern Iran and Northern China.

This new cultural complex shows a marked difference in comparison to the previous Period III, characterized by coarse hand-made pottery and by chopper-chopping tools (as in other sites and cultures of Central Asia, the "pebble technique" persisted in the Swāt Valley down to neolithic/calcolithic times). But the cultural change seems to have been gradual, with the progressive disappearance of the old types and models. In this way it is possible to explain the persistence of the semi-subterranean dwellings up to the middle of the 2nd millennium or later. The change in this pattern of residence may have been finally produced by the recorded contacts with peoples of the great southern plains, but it seems originally connected with the great cultural change which started in the valley around 1800/1700 B.C. at the beginning of this culture.

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Vṛścikodarī: A Study of the Relationship between Myth and Image in Indian Art

by PHYLLIS GRANOFF

There are numerous sculptures from medieval India that depict a hideous hag-like goddess with a scorpion on her caved-in belly. The majority of these images originate from Northwest and Central India. The goddess is clearly Śaivaite with her *jaṭāmukuṭa* adorned with a skull, her ornaments of snakes, and some of the attributes that she carries, for example the *ḍamaru* or drum and the *triśūla* or trident. She sometimes stands alone or sits in *lalitāsana*, but most often she dances in *pratyālīḍha* posture on a prone figure while skeletons and dwarfs eagerly watch her performance. The goddess is usually many armed although the exact number of her arms and the nature of her attributes differ from one statue to the next. She is found not only on Śiva temples from the tenth century onwards, but also on medieval Jain temples in North India. Her most common position is on an outside wall of the *garbhagṛha* or *antarāla*. She is often accompanied either by a dancing Śiva or a dancing Vīrabhadra.

The most striking iconographic trait of this goddess, the scorpion on her abdomen, distinguishes her from otherwise similar representations usually identified as Kālī or Cāmuṇḍā. Cāmuṇḍā is not associated with a scorpion in any of the usual iconographic texts. In fact, if one had to rely strictly on standard iconographic sources the significance of the scorpion and the exact identity of the goddess would remain a mystery, for there is no iconographical formula for a fierce goddess with a scorpion on her belly in any of the iconographic texts thus far examined (¹).

(¹) In addition to the texts mentioned by J.N. Banerjea, *The Development of Hindu Iconography,* Calcutta, 1956; N.K. Bhattasali, *Iconography of Buddhist and Brahmanical Sculptures in the Dacca Museum,* Dacca, 1929; M.-Th. de Mallmann, *Les Enseignements Iconographique de l'Agni-purana,* Paris, 1963; T.A. Gopinath Rao, *Elements of Hindu Iconography,* repr., New York, 1968; B. Bhattacharyya, *The Indian Buddhist Iconography,* Calcutta, 1968; B.C. Bhattacharya, *Jaina Iconography,* Lahore, 1939, and U.P. Shah, *Studies in Jaina Art,* Benaras, 1955, I have consulted the following texts:

There are, however, other sources for representations of deities in Indian religious art. It would appear that a number of images can best be understood not through the intermediary of an iconographic text but by direct comparison of these icons to the myths from which they derive. Many gestures and attributes that go unnoticed in an iconographic treatise or in those sections of the *purāṇas* that deal specifically with the appearance of deities in art can be elucidated by a close reading of the stories associated with the deities in question (1).

This paper will introduce several sculptures of "Vṛścikodarī", ‘the goddess with the scorpion on her belly’, most of them heretofore unpublished. It will then explain her curious affiliation with the scorpion on the basis of an extensive study of the puranic myths dealing with terrifying and destructive goddesses in the Indian pantheon. It will propose an identification of the figure as Bhadrakālī, Vīrabhadra's companion at the destruction of Dakṣa's sacrifice. Finally, it will relate this goddess to figures of Cāmuṇḍā and Durgā in *maṇḍalas* and attempt to draw some general conclusions about the process of development of at least certain Indian deities from concrete individualized protagonists in myths to abstract representations and symbolic images.

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(1) This question was further discussed in my article « The Udayagiri Mahiṣāsuramardinī: An Analysis of the Myth », *EW,* XXIX, 1979, pp. 139-151.

1. *Images of the Scorpion Goddess*

a) Standing Two-Armed Figure in the Royal Ontario Museum, Toronto

Fig. 1 shows a standing two-armed figure of a goddess with a scorpion on her belly. The figure is in the Royal Ontario Museum in Toronto (3). It dates from the late ninth century to the early tenth century A.D. and is of Northwestern Indian origin. The statue, of soft pink sandstone, is headless and armless. Only the withered breasts and the scorpion indicate that we have here a representation of a fierce and terrifying figure. The graceful *tribhaṅga* pose, the soft swaying jewelled strands of the *mekhalā* or girdle, and the necklace and armlets of jewels are all more typical of the beautiful young *surasundarīs* and *apsarases* that adorn the walls of such temples as the Śiva temple at Koṭāi, the Śiva temple at Kerā (4), and the temple to the goddess at Jagat (fig. 2) in the early 10th century A.D. Fig. 3 shows an enlargement of the upper torso. The scorpion is clearly visible. Unlike all of the other statues that we shall examine, this goddess has a normal midriff. There has been no attempt to indicate old age and ugliness by hollowing out the belly. The withered breasts alone seem incapable of conveying decrepitude and death, and the overwhelming impression of the piece is of grace and charm. This work is also distinct from other examples of the goddess with the scorpion in that it has only two arms and stands at rest.

b) The Scorpion Goddess from the Paṅkhanātha Temple at Kheḍ-Brahmā

Fig. 4 is more typical of medieval images of the scorpion goddess. It is from the small temple to Śiva at Kheḍ-Brahmā in Sabarkanth District, Gujarat known as the Paṅkhanātha Temple. It dates from the time of Bhīma, c. 1022-1066 A.D. (5). The goddess dances in *pratyālīḍha* posture. She is accompanied by two dwarf-like figures, one of whom is lying at her feet, resting his head in his palm. He gazes up at the goddess. The second accompanying figure is standing behind this prone dwarf. The sculpture is so badly worn at this point that it is difficult to see either the expression of the face or the attitude of the figure. There is a small animal at the lower left of the goddess. The sculpture is too worn to permit an exact identification, but it may be a lion or a jackal.

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(3) I wish to thank the officials of the Royal Ontario Museum for permitting me to photograph this object and publish the photographs.

(4) See plates 40, 41, 42, 43 for Koṭāi and Kerā, and 22, an image of Svāhā from Danteśvara near Baroda, in U.P. Shah, « Some Medieval Sculptures from Gujarat and Rajasthan », *Western Indian Art, Journal of the Indian Society of Oriental Art*, Special Issue, 1965-1966, pp. 52, 87.

(5) *Ibid.*, p. 69 for the date.

The goddess is six-armed. Among her attributes are a *triśūla* or trident and a severed head. Above her in her uppermost two hands the goddess swings an object that may be either a snake or an elephant skin. The same object is often seen in sculptures of Śiva. Fig. 5 shows a dancing Śiva from the same site. The whip-like object is clearly visible behind the god. Fig. 6 shows a dancing Śiva from a ruined structure belonging to the Mahānaleśvara Temple at Menal, in situ at the far right niche, and fig. 7 provides a close-up of the same. It is clear that the Śiva at Menal holds a snake, for the curving body tilts forward at the left side of the god and forms a distinct cobra hood (6). However, the object that the goddess at Kheḍ-Brahmā (fig. 4) holds is more likely to be an elephant skin than a snake. There is a beautiful image of the dancing scorpion goddess in the museum at Khajurāho. Only two of her many arms remain, but fortunately these are the uppermost pair and they stretch between them a whip-like object that ends clearly at the right in an elephant's head. An eight-armed image of the scorpion goddess at Markandi in Mahārāṣṭra similarly displays an elephant skin above her head (7). Moreover, we shall see below that the scorpion goddess is in effect identical to a group of images of Cāmuṇḍā, members of which swing the elephant's skin above their head (8). Finally, medieval Indian literature also associates an elephant skin with a fierce many-armed dancing goddess (9).

The goddess at Kheḍ-Brahmā has withered breasts like her counterpart in the Royal Ontario Museum (fig. 1), but here the sculptor has made an even greater attempt to convey her emaciated form, at the cost perhaps of much feminine charm. The Kheḍ-Brahmā sculpture has what is typical of all other representations of the scorpion goddess: the abdomen is carefully hollowed out, and the scorpion, barely visible in the present photograph but clear in the slide from which it was made, rests in the space thus formed. This is an old device for indicating fasting or the emaciation of old age and approaching death, famous in Gandharan portrayals of the fasting Buddha and in the skeletons and goblins of many sites throughout India. Fig. 8 shows an image of Cāmuṇḍā from the Kailāsanāth Temple at Ellora. Her bare belly is hollowed out in exactly the same fashion as that of the scorpion goddess at Khed-Brahmā, fig. 4. Thus the carving out of the abdomen in this manner is meant to indicate extreme emaciation, and not to provide an x-ray view of the contents of the stomach as one author has suggested (10).

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(6) There are other representations of Siva with a snake stretched above his head. See R. Chanda, *Medieval Indian Sculpture in the British Museum,* London, 1936, plate XXIII and B. Sahai, « A Rare Dancing Image of Bhairava », *Dr. Satkari Mookerji Felicitation Volume,* Chowkhamba Sanskrit Series, vol. LXIX, Benaras, 1969, pp. 286-290. Bhattasali, *op. cit.,* illustrates several dancing Sivas with a whip-like object above the head. In all of his illustrations the identity of the object is ambiguous. See plate XLV.

(7) For an illustration of the Khajurāho sculpture see plate XIX, 3, *Journal of the Indian Society of Oriental Art,* 2, 1967-1968. The image is briefly discussed by R. Sengupta, « Identification of the Deity in the Caturbhuja Temple at Khajuraho », pp. 63-66. The image from Markandi is plate XLVII, 1 in G.B. Deglurkar, *The Architecture and Sculpture of Maharashtra,* Nagpur, 1974.

(8) Bhattasali, *op. cit.,* pp. 209-212 and de Mallmann, *op. cit.,* pp. 153-159; see p. 155 in particular.

(9) Bhavabhūti in *Mālatīmādhava* V 23 has a verse to this goddess who dances furiously and swings an elephant skin in her hands.

The impression of emaciation is heightened in the Khed-Brahmā scorpion goddess (fig. 4) by the schematic lines above the hollowed out belly that are meant to indicate the rib cage. This image in its total effect is somewhere in between the Toronto statue and the examples that will follow. The sculptor has gone to some length to convey an impression of death and decay in the upper torso, but the lower torso still exudes health and vitality.

c) The Scorpion Goddess at Un

There are at least two images of the scorpion goddess among the ruined eleventh-century Paramāra temples at Un. The first of these (fig. 9) is an eight-armed dancing figure. The goddess has a *jaṭāmukuṭa* with a skull at its base and there is an oval halo behind her head. She stands on a block of stone and a figure reclines behind her. Like the similarly placed figure behind the scorpion goddess at Khed-Brahmā (fig. 4), this one also rests his head in his hand. There is a small seated figure at the feet of this reclining one. It has one hand raised while the other is bent downward with the tips of the fingers touching the leg.

All but three arms of this goddess have been destroyed. The two upper arms swing the elephant skin between them and the third makes a gesture that is also very typical of the scorpion goddess and related figures. The hand is raised and the index finger touches the lips. The same gesture appears on an image of Kālī at Jagat in the early 10th century (fig. 10). It has been variously interpreted. Bhattasali thought that the goddess was biting her fingernails (11), a suggestion that can be rejected because the hand is in fact placed on the closed lips and not inside the open mouth. B.N. Sharma saw in the gesture the *vismayahasta* (12), but he does not state any textual support for this identification. Banerjea noticed the identical hand gesture in an image of Viṣṇu at Khajurāho whom he calls "Viṣṇu Maunavratin", 'Visnu Observing the Vow of Silence'. He also located the gesture in a bronze of Hanumān from the temple of Shermadevī in the Tinnevelly District of Madras State. He believed that the gesture there indicates respect and devotion (13). De Mallmann sought to find textual support for this hand position in a description of the sixty-four *yoginīs* found in the *Mayadīpikā*, cited by Hemādri in his *Caturvargacintāmaṇi*. Verse 11 describes the *yoginī* Layā as *tarjanyāsaktasikthakā*, ‘having beeswax stuck to her index finger’. De Mallmann suggested a reading *tarjanyā saktasṛkvikā*, ‘having the edge of the mouth touched by the index finger’. In fact, the reading as it stands is perfectly comprehensible. *Sikthaka* or beeswax was used in Tantric rites and its mention as an attribute of one of the sixty-four *yoginīs* thus does not demand emendation of the text (14).

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(10) Ph. Rawson, *Indian Sculpture,* London, 1966. Rawson illustrates on p. 127 a seated four-armed image of the scorpion goddess from Northeast India in the 13th century. He remarks that the scorpion is "in her belly".

(11) Bhattasali, *op. cit.,* p. 210.

(12) B.N. Sharma, « Unpublished Śakti Sculptures from Central India », *Journal of the Indian Society of Oriental Art,* 2, 1967-1968, pp. 49-52. See his plate XIV, 1 and 3 for further examples of the scorpion goddess.

The puzzling hand gesture of fig. 9 can, however, be located in a Sanskrit source. It is recorded in the *Abhinayadarpaṇa* where it is called *sūcihasta*. *Sūcihasta* indicates among other things astonishment or a threat (15). Although the *Abhinayadarpaṇa* does not indicate the position of the hand as a whole, it does detail the position of each of the fingers and this description corresponds exactly to the fingers of the scorpion goddess at Un (fig. 9), Jagat (fig. 10) and the other examples that will be discussed below.

The scorpion goddess at Un in fig. 9 has the withered breasts and the caved-in belly that we saw in the statue at Khed-Brahmā (fig. 4). The scorpion is barely visible on the photograph but clear on the slide from which it was made. It appears on the gourd-shaped belly which is flanked on either side by lines indicating the rib cage. This statue at Un is a standard representation of the scorpion goddess: the dancing pose, elephant skin, caved-in belly, and *sūcihasta* are traits that we shall find repeated in many other examples of the goddess.

Fig. 11 is another image of the scorpion goddess from Un. She has a high *jaṭāmukuṭa* and is accompanied by a reclining figure and two others, one of whom has a caved-in belly and a prominent rib cage, just like the goddess herself. He gestures towards the goddess and may be holding a bowl in his outstretched hand. Few of the goddess' arms remain intact. Among the attributes that are visible are the *ḍamaru* or drum, the *triśūla* or trident, and the top of a *khaṭvāṅga* or skull club. In her uppermost two hands is stretched the elephant skin, and one hand is in the *sūcihasta* gesture touching the lips. The facial features of this goddess are more horrible than those of any of the previous examples. The eyes bulge wide open and the cheeks are sunken and hollow. The long garland of skulls that was also worn by the scorpion goddess at Khed-Brahma (fig. 4) and the other example of the scorpion goddess at Un (fig. 9) here passes in front of one leg and behind the other in a complicated swirl.

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(13) Banerjea, *op. cit.*, plate 7 and p. 261.

(14) de Mallmann, *op. cit.*, p. 295. For the use of beeswax in *abhicāra* ceremonies see *Bhairavapadmāvatīkalpa*, op. cit., p. 67.

(15) *The Mirror of Gesture, Abhinaya Darpaṇa of Nandikeśvara*, transl. by A. Coomaraswamy and G.K. Duggirala, repr., New Delhi, 2nd ed., 1970, p. 32 and plate XIII A.

d) The Scorpion Goddess at Nohta

Fig. 12 shows an image of the scorpion goddess from the Mahādeva Temple at Nohta, late 10th century A.D. The goddess appears on the outside wall of the *antarāla* (fig. 13). She is four-armed and dances in *pratyālīḍha* posture on the back of a reclining figure who rests his head in his hand. Another small figure with a protruding belly stands behind him. The goddess does not swing the elephant skin over her head, behind which is a round halo. There is a *gaṇa*-like figure at either side of this nimbus. The goddess has a slightly hollowed-out belly which displays a large and prominent scorpion. Her breasts sag and the rib cage is carefully indicated by a series of parallel lines. She wears a necklace of snakes, and lines on her arms and legs seem meant to indicate bones and sinews that show through her scant flesh.

The goddess here makes the *sūcihasta* gesture with one hand. The only attribute that she carries that is clear is the fish held in the remaining lower hand. B. N. Sharma published a standing image of the scorpion goddess from the Nīlakaṇṭha Temple at Arthūṇa. She carries a bowl with a fish in it in her lower left hand. Sharma sought to connect the fish with left-handed Tantric practices, the fish being one of the five *makāras* of left-handed Tantric worship (16). There is a problem with this interpretation in that we have no indication that the scorpion goddess at Nohta was in fact part of a left-handed Tantric cult. She is accompanied by a conventional figure of the dancing Śiva (fig. 14) and a dancing Vīrabhadra appears on the opposite side of the temple (fig. 15). Śiva killing Andhakāsura appears on the rear wall of the *garbhagṛha* (fig. 16). There is thus nothing in the sculptural program at Nohta that would indicate that the temple and its images were in any way connected with a left-handed Tantric cult.

There is another possible interpretation of the significance of the fish when it is held by a goddess. It is based upon a myth in the *Skandapurāṇa*. In the *Skandapurāṇa, Kaumarikākhaṇḍa*, chapter 65, the story is told of Bhīma who refuses to pray to the goddess Ekānaṃśā because she is a woman. The goddess is enraged by this insult and in order to show him her power she strikes him with blindness. Convinced of his folly, Bhīma repents and offers his complete devotion to her. The goddess gives him back his ordinary eyes and a third eye for seeing things that are beyond the range of the normal sense organs. She also informs him that she will cure the blindness of all her faithful by extracting the essence of light from the eyes of fish (verse 101). The fish is thus connected with the gift of sight, a boon of the goddess. There are other instances when the goddess Pārvatī cures blindness (*Skandapurāṇa* 3.19.9) or promises the worshipper a divine eye (*Skandapurāṇa* 7.2.9.51), but none of them specifically mentions that she makes this eye from the essence of light that she finds in fish eyes. The suggestion, then, that the fish refers not to Tantric practices for which we have no evidence at many of the sites at which the scorpion goddess appears, but to an association of goddesses with sight and divine wisdom must remain just that until we locate further corroborating evidence.

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(16) Sharma, *op. cit.*, p. 49. The fish is an attribute of the Jain goddess Jvālāmālinī who has very definite Tantric associations. See *Jvālāmālinīkalpa* cited in note 1.

e) The Scorpion Goddess at Bheraghāt

Fig. 17 shows an image of the scorpion goddess from the temple of the sixty-four *yoginīs* at Bheraghāt. The goddess has huge bulging eyes and a gaping mouth. She dances on a figure who has tightly twisted curls reminiscent of the curls on the Buddha's head. A number of skeletons frolic and dance around her. None of her arms remains and the only attribute that is left is a part of the elephant skin that she swings over her head. Her hair stands on end and her breasts are withered and sagging. The hollowed out belly shows a small scorpion barely visible on the photograph, but clear on the slide from which the photograph was made. The present example of the scorpion goddess is one of four such dancing figures that accompany the sixty-four *yoginīs* at Bheraghāt. Although most of the *yoginīs* are identified by inscription, all four of these accompanying goddesses are uninscribed.

f) The Scorpion Goddess from Bijolia

The scorpion goddess at Bijolia (fig. 18) appears not on a Hindu temple but on a Jain temple. She is so badly damaged that it is impossible to determine even the number of arms that she once possessed. The goddess dances in *pratyālīḍha* posture on a figure who like his counterpart in the sculptures above rests his head in his palm. A small seated figure drinks from a bowl. He is probably one of the numerous *gaṇas* who in the myths accompany Śaivite deities on their missions of destruction and drink the blood of the slain victims.

The goddess has a *jaṭāmukuṭa* marked with a large skull. Her breasts are withered and hanging and she has a deeply hollowed out belly with a scorpion at its centre. Her remaining attributes include a severed head, trident, arrow, *damaru*, and bowl, perhaps containing a fish as did the bowl held by the scorpion goddess at Arthūṇa. It would appear that her uppermost hands held the elephant skin above her head, however the poor state of preservation makes it impossible to state so with any certainty. The goddess has a soft, full face and delicate features that contrast with her otherwise emaciated condition.

The appearance of the scorpion goddess known predominantly from Hindu temples on a Jain structure is not unexpected. Jainism incorporated numerous Hindu rituals and deities to give it as rich a pantheon as Hinduism itself had in the medieval period (¹⁷).

g) The Scorpion Goddess in South India: Belur

Fig. 19 is the only Southern representation of the scorpion goddess that I know, although undoubtedly there are more. She comes from the temple at Belur which was built in 1117 A.D. She is twelve-armed and dances, unaccompanied by either the reclining figure or the drinking dwarf. She holds, among other things, a *damaru* or drum, a bow, knife, quiver, and snake. Her belly is emphatically hollowed out and shows a small scorpion. An attempt has been made to indicate the bones and sinews of the legs by means of a series of parallel lines. Like the scorpion goddess at Bheraghāt (fig. 17) she has a hideous face. Her eyes bulge, her cheeks are sunken, and her mouth opens in a scream to reveal several fang-like teeth.

(¹⁷) The question of Hindu deities on Jain temples, and indeed of Hindu motifs in Jain literature as a whole, has never been adequately examined. The Jains composed *purāṇas* in the medieval period in an effort to compete with the popular Hindu texts of the same name. These *purāṇas* incorporated many of the stories from the Hindu epics the *Mahābhārata* and the *Rāmāyaṇa*, as did the copious *Kathākośas*, Jain collections of popular and religious tales. The 1008 names of the Jinas are often taken from similar lists in the Hindu *purāṇas*, although they are glossed differently. (See the *Jinasahasranāma* of Āśādhara ed. Pandit Hiralal, Jñānapīṭha Mūrtidevī Jaina Granthamālā, Sanskrit Grantha No. 11, Benaras, 1954.) Jain *stotras* of their goddesses deliberately identify them with all the goddesses of the Hindu pantheon (for a discussion of the *stotras* in the *Bhairavapadmāvatīkalpa* see my paper "Some Unusual Images of the Goddess of Learning in Medieval India", AIUON, 1978). I should like to take this opportunity to correct an error in that paper. Most scholars of iconography identify the attribute that Brahmā and Sarasvatī hold as a *sruvā* or sacrificial ladle, and not as a *daṇḍa*, as I have done. However, the prevalence of the *daṇḍa* as an attribute of these two figures in the texts and its absence in the sculptures lead to further questions on the relationship between textual source and art work. An interesting panel from the ceiling of the Yageswar temple at Sadri (photograph 115/67, Archaeological Survey of India) shows Brahmā with an implement that is somewhere in between a *sruvā* and a *daṇḍa* or club; the bowl of the *sruvā* has been carved below the top of the implement, which would have made it completely non-functional. In addition, Viṣṇu in the same relief carries his traditional implement, the *gadā* or war club, which is in fact identical to the form of the *sruvā* that Brahmā and Sarasvatī carry in much of medieval North India. One wonders if the sculptors themselves have not confused the two implements. Such a confusion is not unknown in Indian iconography; see D. Mitra, *Bronzes of Achutrajpur*, New Delhi, 1978, p. 82, for another example. Both this question, of the ambiguity of iconographical details, and the question of Jain borrowings from Hindu sources deserve further study.

There are numerous other representations of the scorpion goddess, some of which have been recently published. The goddess appears in Mahārāṣṭra at Markandi where she is eight-armed and holds a *khaṭvāṅga*, severed head, trident, and empty bowl. One hand is raised to the mouth in the *sūcihasta* gesture. She has a *jaṭāmukuṭa* with a band of skulls and the typical hollowed-out belly with the scorpion. She dances on a figure who this time rests his head on his outstretched arm. Two skeletal figures accompany her, one of whom himself holds a severed head. He is related to the blood drinking figures who accompany the scorpion goddess at Un (fig. 11) and Bijolia (fig. 18) and is probably a *gaṇa* holding the spoils of victory. The scorpion goddess also appears at Aundha on the Naganātha Temple and at Dharmapuri on the Kedāreśvara Temple where she is six-armed (18). There are also examples published from Orissa (19); the Nīlakaṇṭha Temple at Arthūṇa, Rajasthan, District Banswada; Paramāra ruins (20), and from Khajurāho (21). These undoubtedly represent only a fraction of the total number, for the scorpion goddess seems to have been one of the most popular female members of the medieval Indian pantheon. It remains now to try to identify her and explain her extraordinary iconography.

2. *The Identity of the Scorpion Goddess: Bhadrakālī and the Destruction of Dakṣa's Sacrifice*

Scorpions are not as plentiful in Indian myth and legend as they are in the Indian countryside. There are strikingly few references to scorpions in the *purāṇas* and the iconographical texts. Aghora, a fierce representation of Śiva, is adorned with scorpions according to the *Liṅgapurāṇa, Uttarārdha* chapter 26 verse 17 where he is described as *sarpavṛścikabhūṣaṇa*, 'having snakes and scorpions as his ornaments', and chapter 50 verse 25 where he is described as *vṛścikābhāraṇa*, 'having scorpions for ornaments'. In the *Devatāmūrtiprakaraṇa* attributed to Sūtradhāra Maṇḍana, chapter 6 verses 6-12, Aghora is also described and said to have a necklace of scorpions. The same description appears in the *Rūpamaṇḍana* chapter 4, verse 6, ascribed to the same author. Vīrabhadra in the *Kāraṇāgama* is similarly referred to as *vṛścikābhāraṇa*, 'having scorpions for ornaments' (22). In the *Skandapurāṇa* 1.1.25.23 the goddess Caṇḍī is described as having a necklace (*padaka*) of scorpions. In folk tales and folk songs scorpions sometimes appear as creatures to be feared in the forest (23), but they do not seem to have any particular attributes associated with them that might explain their appearance on the belly of the scorpion goddess.

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(18) Deglurkar, *op. cit.*, plate XVII 1, and XVIII 3, and pages 129-130.
(19) Rawson, *op. cit.*, p. 127.
(20) Sharma, *op. cit.*, plate XIV 1 and 3.
(21) Sengupta, *op. cit.*, plate XIX.
(22) Rao, *op. cit.*, vol. II, pt. 2, p. 96.

An examination of the various iconographic texts yields no further clue, and the identity of the scorpion goddess would remain a mystery were it not for a passage in the *Skandapurāṇa* that deals not with iconography but with the origin and merit of the *tīrtha* Kāyāvarohaṇa, *Skandapurāṇa* 5.82.

The passage opens with Śiva relating to Pārvatī the greatness of Kāyāvarohaṇa, a Śiva *tīrtha*, probably in Benaras (24). He tells the following tale. In the past Dakṣa Prajāpati was born from the right thumb of Brahmā, while his wife was born from the left thumb of Brahmā. Together they produced five hundred daughters (5.82.1-3). Dakṣa distributed these daughters among various husbands, giving Satī to Śiva, and twenty-seven other daughters to the moon (5.82.5). The moon favoured only one of them, Rohiṇī, and ignored the others whereupon they reported his behaviour to their father Dakṣa. Dakṣa cursed the moon to wax and wane for this ill treatment of twenty-six of his wives (5.82.6). The moon then cursed Dakṣa in return to be reborn as a king, the son of Pracetas, known under the patronymic Prācetasa (5.82.7). King Prācetasa, the cursed and reborn Dakṣa, performed an *aśvamedha*, the great horse sacrifice that was the mark of a great king. Deluded, he failed to invite Śiva to partake of the sacrificial offerings (5.82.8). Then Pārvatī, remembering that this very King Prācetasa had insulted her when he was in his birth as Dakṣa Prajāpati and she was his daughter Satī, ordered Śiva to destroy Dakṣa-Prācetasa and his great sacrifice (5.82.10). Śiva tried to dissuade Pārvatī, but she was so enraged recalling her former father's insult to her in a former birth that when she rubbed her nose there suddenly sprang up a hideous and terrifying female (5.82.18) whom Śiva now describes to Pārvatī in the following terms:

> jātā strī bhrukuṭīvakrā caturdaṃṣṭrā trilocanā 5.82.18b
> baddhagodhāṅgulitrā ca kavacabaddhamekhalā
> sakhaḍgasadhanuṣkā ca satūṇā sapatākinī 5.82.19
> sahasrāsyā śatabhujā *sahasracaraṇodarī*
> pratikūlaiḥ padair devi kampayantī tathā bhuvam 5.82.20

> O Pārvatī, a woman was born, her face contorted in a frown, having four fangs and three eyes, having the wrist and finger guards of an archer, her girdle bound in armour, holding a sword and bow,

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(23) Sh. Hivale and V. Elwin, *Songs of the Forest: The Folk Poetry of the Gonds*, London, 1935, pp. 51, 82, 105.

(24) P.V. Kane, *A List of Tīrthas*, off-print from *History of Dharmaśāstra*, vol. IV, Poona, 1953, p. 767.

> carrying a quiver and a flag, with a thousand faces and a hundred arms and *with a millipede on her belly*, making the earth tremble with her raging foot steps.

This female is called Bhadrakālī and she accompanies Vīrabhadra, the fierce male creature created by Śiva, to destroy Dakṣa's sacrifice (5.82.20-21). Together they demolish the *aśvamedha* of Dakṣa-Prācetasa and maim the divine and earthly participants. Śiva concludes his discourse to Pārvatī by explaining that Kāyāvarohaṇa is the place where he, duly propitiated by the gods, was persuaded to resurrect the attendants at Dakṣa-Prācetasa's sacrifice and Dakṣa-Prācetasa himself (25).

The legend of Kāyāvarohaṇa thus describes a fierce female named Bhadrakālī who emanated from Pārvatī when she wished to destroy the sacrifice of her former father Dakṣa, now reborn as King Prācetasa. The description given for this Bhadrakālī provides the clue to the exact identity of our scorpion goddess. Bhadrakālī in verse 19 is described as *sahasracaraṇodarī*, ᶜhaving a millipede on her bellyᵓ. Now, the *Vaijayantīkośa* lists as one of the synonyms of *vṛścika*, the normal Sanskrit word for ᶜscorpionᵓ, *śūkakīṭa* which is a kind of caterpillar with bristles (26). Moreover, this *śūkakīṭa* is considered by the medical authorities in

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(25) This is an unusual recital of the destruction of Dakṣa's sacrifice. The tale of Dakṣa's sacrifice is told in the following texts:

Vāmanapurāṇa 2.7-5.61. *Kūrmapurāṇa* 1.15.1-99. *Padmapurāṇa* 1.5.1-95. *Brahmapurāṇa* 39.1-97; 109.1-38. *Brahmāṇḍapurāṇa* 1.13.44-76. *Bhāgavatapurāṇa* 4.2.1-5.26. *Matsyapurāṇa* 71.10-16. *Liṅgapurāṇa* 1.99.1-100.51. *Varāhapurāṇa* 21.12-88. *Vāyupurāṇa* 1.30.37-293. *Viṣṇudharmottarapurāṇa* 1.107.98-114; 1.234.1-235.36. *Śivapurāṇa* 2.2.27.1-37.68. *Skandapurāṇa* 1.1.2.1-5.47; 2.7.8.15-66; 4.87.1-89.1.36; 7.1.199.1-59; 7.2.9.16-135. *Mahābhārata* 10.18.1-26; 12.204.1-208; 12.284; 13.160.11-24. *Harivaṃśa* 3.32.1-63. *Garuḍapurāṇa* chapter 5.

(List from the *Vāmanapurāṇa*, critical edition, Kashiraj Trust, Benaras, 1967, appendix 4, p. 766. I have added *Mahābhārata* 12.284 and *Garuḍapurāṇa*) I have read all of these accounts except for the *Brahmāṇḍapurāṇa* and the *Viṣṇudharmottarapurāṇa* which were unavailable to me. Normally it is Dakṣa Prajāpati, the father of Satī, who sacrifices and fails to invite Śiva. Satī then commits suicide out of fury, and Śiva, bereaved and angry, creates either Vīrabhadra or a fiery emanation to destroy Dakṣa's sacrifice. The only major departure from this plot is the *Varāhapurāṇa* in which Śiva is furious because the gods have usurped his creative functions. Of the accounts examined only that cited in the body of this paper, that in the *Skandapurāṇa* 7.2.9.16-135, and that in the *Kūrmapurāṇa* shift the sacrifice from Dakṣa Prajāpati to his reincarnation Prācetasa. In both the *Skandapurāṇa* 7.2.9.16-135 and the *Kūrmapurāṇa* it is Śiva who had cursed Dakṣa Prajāpati to be reborn as Prācetasa, because Dakṣa had insulted Satī and Śiva.

Bhadrakālī is described only in the *Skandapurāṇa* 5.82 summarized in the body of this paper. She appears, however, in the *Śivapurāṇa, Vāmanapurāṇa, Brahmapurāṇa, Mahābhārata* 12.284, *Kūrmapurāṇa,* and the *Skandapurāṇa,* 1.3.50.5 accounts of the destruction of Dakṣa's sacrifice.

(26) *Vaijayantīkośa* of Yādavaprakāśa, ed. Gustav Oppert, Madras Sanskrit and Vernacular Text Publication Society, London, 1893, p. 150 1.65 and p. 784.

India to be a poisonous beast classed along with centipedes, millipedes and scorpions ([27]). I would venture to suggest that a semantic ambiguity underlies the transition from the scorpion on our statues to *sahasracaraṇa* or millipede in the legend of Kāyāvarohaṇa, scorpion being replaced by *śūkakīṭa* since both are denoted by the single word *vṛścika,* and then *śūkakīṭa* being replaced by the more common and less esoteric *sahasracaraṇa* or millipede. It is easy to see how a millipede and a caterpillar with bristles might be thus exchanged for one another, particularly since the medical texts in fact consider them to be closely related and since they might be drawn or sculpted in exactly the same form. The process might be illustrated as follows:

1. Myth of the destruction of Dakṣa's sacrifice in which Bhadrakālī is *vṛścikodarī* or has a scorpion on her belly. This would be the source of our statues.

2. Misinterpretation of the word *vṛścika* meaning 'scorpion' to mean *śūkakīṭa* or 'caterpillar with bristles', *śūkakīṭa* being one possible meaning of the word *vṛścika.*

3. Substitution of the more common *sahasracaraṇa,* 'millipede', for *śūkakīṭa* on the basis of similarity in appearance and classification together in the medical texts. This would give the Bhadrakālī of the Kāyāvarohaṇa legend, *Skandapurāṇa* 5.82.

An identification of the scorpion goddess with Bhadrakālī would also help to account for the *gaṇa*-like figures who accompany her. It is to be recalled that in figs. 11 and 18 a *gaṇa* drinking blood appears at the feet of the goddess and that at Markandi a *gaṇa* stands at her side holding a severed head. In all of the myths of Dakṣa's sacrifice *gaṇas* participate in the slaughter. They commonly feast on the blood and remains of the slain.

In conclusion, the legend of Kāyāvarohaṇa has enabled us to identify the scorpion goddess as Bhadrakālī. Such an identification would not have been possible from the iconographic treatises alone. The next question is to try to uncover exact formulae in the texts that might have governed the creation of the images of Bhadrakālī that have been discussed in this paper, all of them differing in number of arms and in attributes. Bhadrakālī is not often described in the iconographic texts, and when she is the scorpion is not mentioned. In the *Śāradātilakatantra* 22.105 Bhadrakālī is described as fierce, having her hair

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([27]) *Suśrutasaṃhitā,* tr. K.K. Bhashagratna, (Chowkhamba Sanskrit Series, vol. XXX), Benaras, 1963, II, chapter 8, p. 749 treats centipedes, *śūkakīṭas* (*śūkavṛnta*) and scorpions in the same class.

standing on end, and carrying an axe, skull, drum, and trident. The *Kālikāpurāṇa* depicts her as sixteen-armed with long twisted hair and necklaces of snakes. She holds the trident, discus, sword, conch, arrow, lance, thunderbolt, and staff in her right hands and the shield, hide, bow, noose, hook, bell, axe, and mace in her left hands. She has three eyes, stands on a lion, and is the killer of the buffalo demon Mahiṣa (28). Rao cites a description of Bhadrakālī as eighteen-armed and beautiful. Her attributes are the *akṣamālā* or rosary, *triśūla* or trident, *khaḍga* or sword, *candra* or moon, *bāṇa* or arrow, *dhanus* or bow, *śaṅkha* or conch, *padma* or lotus, *sruk* or sacrificial spoon, *sruva* or sacrificial ladle, *kamaṇḍalu* or water vessel, *daṇḍa* or club, *śakti* or lance, *agni* or fire, *kṛṣṇājina* or antelope skin, water, a jewelled vessel, and the gesture of freedom from fear (29). This Bhadrakālī is seated in a chariot drawn by four lions, a feature which is also mentioned in one *Skandapurāṇa* account of the destruction of Dakṣa's sacrifice. *Skandapurāṇa* 4.87.58 tells that Satī goes uninvited to Dakṣa's sacrifice riding in a marvellous chariot pulled by lions. Bhadrakālī as Satī's angry self might be expected to have the same conveyance.

These descriptions only further complicate the already bewildering picture. None of them corresponds to any of the images reproduced in this paper. It almost seems as if variety of form were itself a characteristic of this goddess. Thus, although the Kāyāvarohaṇa episode from the *Skandapurāṇa* has permitted us to give the scorpion goddess a proper name, we are still without any iconographic formulae governing her manifold appearances in art.

Bhadrakālī is related to another group of sculptures that are similarly marked by a wide divergence in form and a lack of correspondence between image and textual description. This raises the interesting suspicion that perhaps there is something in the nature of these deities that permits a wide divergence of individual form in contrast to the more usual strict reliance on exact textual prescription. The next sections of this paper will explore this problem, concluding that Bhadrakālī and the goddesses to whom she is related are in fact part of a symbolic group in which the exact appearance of the individual members, and in fact their identity as well, was less significant than the number and the configuration of the group as a whole. We shall further suggest that because of this phenomenon iconographic treatises had little interest in exhaustively listing individual variant forms of the single goddesses. The modern investigator of Indian iconography when he attempts precisely and exactly to categorize individual representations in accordance with the texts is doomed to failure in such a case. He asks from the texts something that never was their intention.

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(28) *Kālikāpurāṇa, op. cit.*, chap. 62, vv. 56-61.
(29) Rao, *op. cit.*, vol. I, pt. 2, p. 357.

3. *The Aṣṭacāmuṇḍās and Navadurgās*

Bhadrakālī resembles in her iconography another goddess who appears on the temples of North India, often in the same favoured places: the external walls of the *garbhagṛha* and the *antarāla*. Fig. 20 shows this goddess from the Limboji-Mātā shrine at Delmāl, Gujarat, dated to the reign of King Karṇa, 1066-1094 A.D. (30), with fig. 21 a detail of the goddess. She is six-armed and in a dancing posture. Only one small accompanying figure is visible on the photograph. The only attributes that are clearly distinguishable are a *ḍamaru* and a severed head. The goddess has one of her left hands raised to her lips in the *sūcihasta* gesture. Her breasts are withered and her belly is slightly hollowed out. It bears no scorpion. In all other respects, however, this Delmāl goddess is virtually identical to Bhadrakālī the scorpion goddess: she is a fierce female who dances in *pratyālīḍha* pose, raises one hand to her lips in the *sūcihasta* gesture, and carries a variety of Śaivaite attributes.

Fig. 22 shows another such goddess from the Mahānaleśvara Temple at Menal (31). At Menal the goddess is eight-armed. She dances before a figure who reclines with his head resting on his palm just like corresponding figures in images of Bhadrakālī (figs. 9, 11, 12, 18). She swings the elephant skin above her head as does Bhadrakālī at Khajurāho, Markandi, Kheḍ-Brahmā (fig. 4), Un (figs. 9, 11), and Bijolia (fig. 18). She holds in her right hands a trident, sacrificial knife, *vajra*, and the elephant skin, and in her left hands a severed head, *khaṭvāṅga* or skull club, a bowl, and the elephant skin. She is the best preserved of all of our images thus far.

Fig. 23 shows the same goddess from a ruined temple at Chittor, fig. 24 being a detail. This is chronologically the latest representation to be discussed in this article. The goddess is eight-armed and accompanied by two small figures. The figure upon whom she dances has been destroyed. She swings the elephant skin over her head and carries a *khaṭvāṅga*, trident, and fish, an attribute that we encountered for Bhadrakālī at Nohta (fig. 12) and Arthūṇa (32). Occurring on a Jain temple, this figure provides a parallel to the image of Bhadrakālī on the Jain temple at Bijolia (fig. 18).

There are numerous other examples of this fierce dancing goddess without the scorpion, with the elephant skin swinging above her head, and the hand raised to the lips. Bhattasali reproduced one such figure whom he identified as one of the eight Cāmuṇḍās (33). The Aṣṭacāmuṇḍās or Eight Cāmuṇḍās appear in the *Agnipurāṇa* 50.30b-37 (34). Their names are as follows: Rudracarcikā, Rudracāmuṇḍā, Mahālakṣmī, Siddhacāmuṇḍā, Siddhayogeśvarī, Bhairavī, Kṣamā, and Kṣemakārī. According to the *Agnipurāṇa* some of the eight are dancing (Rudracarcikā, Rudracāmuṇḍā). It is clear both from the *Agnipuraṇa* descriptions and from the images reproduced in this paper (figs. 20-24) that just as was the case with Bhadrakālī, so too is there a wide variety in the number of arms and in the attributes of these Eight Cāmuṇḍās. Furthermore there is a similar difficulty in matching image and text. None of the images here reproduced corresponds exactly to the descriptions given in the *Agnipurāṇa*. Our initial problem of finding exact textual sources for individual images remains. Some light is shed, however, by still another group of fierce goddesses to which both the Eight Cāmuṇḍās and Bhadrakālī are related.

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(30) U.P. Shah, « Some Medieval Sculptures from Gujarat and Rajasthan », *cit.*, p. 69. For other opinions on the date of this temple see K.F. Sompura, *The Structural Temples of Gujarat*, Ahmedabad, 1968, pp. 101-102.

(31) Dated by K. Deva, *The Temples of North India*, New Delhi, 1969, to the late 11th century and by H.B. Pal, *The Temples of Rajasthan*, Alwar and Jaipur, 1969, p. 17 to the middle of the 13th century.

(32) Illustration Sharma, *op. cit.*, plate XIV 1.

The Eight Cāmuṇḍās are related to another group of fierce goddesses, the Navadurgās or Nine Durgās. The Navadurgās are in fact eight figures around a central ninth figure, Ugracaṇḍā. They are described in a number of texts and the list of their names is not always the same. The *Agnipurāṇa* provides two passages dedicated to the Navadurgās, 50.6.13 and 185.3b-10 (35). The names given in the *Agnipurāṇa* are Rudracaṇḍa, Pracaṇḍā, Caṇḍogrā, Caṇḍanāyikā, Caṇḍā, Caṇḍavatī, Caṇḍarūpā, Aticaṇḍā, and the central figure Ugracaṇḍā. The description of these Nine Durgās is different in these two chapters of the *Agnipurāṇa*. Thus we have a single text in which the same Nine Durgās are differently portrayed, a fact in itself requiring some explanation. We shall return to it at the conclusion of this section.

Rao provides a third list of the attributes for these same Navadurgās taken from the *Skandayāmala* in the *Bhaviṣyatpurāṇa* (36). The *Devatāmūrtiprakaraṇa* of Sūtradhāra Maṇḍana, chapter 8 verses 47-60, offers a completely different list of Nine Durgās, and, naturally, different attributes. The goddesses are called Mahālakṣmī, Nandā, Kṣemaṅkarī, Sarvatī, Mahāraṇḍā, Bhramaṇī, Sarvamaṅgalā, Revatī, and Harasiddhi. Banerjea provides still another list: Brahmāṇī, Kālikā, Durgā, Kārttikī, Śivā, Raktadantikā, Śokarahitā, Cāmuṇḍā, and Lakṣmī. This list comes from the *Puraścaryārṇava*, part 3 (37). The *Skandapurāṇa* 1.1.3.50 lists the Navadurgās as accompanying Vīrabhadra to the destruction of Dakṣa's sacrifice. Their names are given as Kālī, Kātyāyanī, Īśānā, Cāmuṇḍā, Muṇḍamardinī, Bhadrakālī, Bhadrā, Tvaritā, and Vaiṣṇavī.

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(33) Bhattasali, *op. cit.*, plate LXXI (b) and p. 210.
(34) De Mallmann, *op. cit.*, pp. 154-157.
(35) *Ibid.*, p. 147.
(36) Rao, *op. cit.*, I, pt. 2, pp. 356-357. See also de Mallmann, *op. cit.*, p. 148.
(37) Banerjea, *op. cit.*, p. 490.

We have thus several different groups of Nine Durgās, and one suspects that further investigation would add to the total number of groups. The first question that we shall ask about the several Navadurgās here is what is their relationship to the Eight Cāmuṇḍās, some of which are essentially identical in iconography to the scorpion goddess Bhadrakālī. The names of the Nine Durgās given in the *Agnipurāṇa* and the *Skandayāmala* provide a ready answer. The Eight Cāmuṇḍās and the Nine Durgās are identical. All Nine Durgās in the *Agnipurāṇa* and *Skandayāmala* list are named Caṇḍā or Caṇḍī, the "ī" being just a different feminine suffix. Now Caṇḍī and Cāmuṇḍā are the same goddess elsewhere in the *Agnipurāṇa* (142) and in most of the puranic accounts of the slaying of the demons Śumbha and Niśumbha (³⁸). In the list of the Navadurgās provided by the *Devatāmūrtiprakaraṇa* we find at least two of the Eight Cāmuṇḍās, Mahālakṣmī and Kṣemaṅkarī, indicating that even when some members of the two groups may differ the Eight Cāmuṇḍās and the Nine Durgās are still not mutually exclusive. Finally, in Banerjea's list of the Navadurgās Cāmuṇḍā herself appears, proving the fundamental identity of the Eight Cāmuṇḍās and the Nine Durgās.

To return now to Bhadrakālī, the scorpion goddess, it should be clear that in her association through her distinctive iconography with the Eight Cāmuṇḍas Bhadrakālī is a part of this much larger group of both the Eight Cāmuṇḍās and the Nine Durgās. This contention is borne out by the *Skandapurāṇa* list of the Nine Durgās cited above in which both Cāmuṇḍā and Bhadrakālī are named as two of the Nine Durgās. In addition, the *Kālikāpurāṇa*, chapter 62 verses 118-121, identifies Bhadrakālī with Ugracaṇḍā who is the central goddess of the Nine Durgās according to the *Agnipurāṇa*. This association of Bhadrakālī with the Eight Cāmuṇḍās and the Nine Durgās will help to explain why she is so variously represented, why the number of her arms and the nature of her attributes differ so from one statue to the next, and why no text has been found that codifies all her variant forms.

It was remarked at the beginning of the discussion on the Nine Durgās that even a single text, the *Agnipurāṇa*, gives two different descriptions of these goddesses. Moreover the existence of so many other lists with different goddesses or with the same goddesses and still other attributes leads one to the suspicion that there is in fact no such thing as the Navadurgās; that there exists a startling array of different individual deities upon which the number nine has been artificially superimposed, the resulting number being more important than the fixed identity of the individual goddesses. The list of the Navadurgās in the *Skandapurāṇa* 1.1.30.50 strengthens this suspicion, for Cāmuṇḍā in fact appears twice, once under the name Cāmuṇḍā and once under the epithet "Muṇḍamardinī",

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(³⁸) See my paper cited in note 2 for a list of the texts and a summary of the myths.

‘the killer of Muṇḍa’. Cāmuṇḍā is the name that was given to the goddess who killed the demons Caṇḍa and Muṇḍa (39). Thus it can be concluded that the group of Navadurgās was not a rigid group of nine specific and iconographically distinct deities. This observation along with the existence of the differing lists noted above provides ample evidence that the identity of the individual Durgās was of secondary significance. It is probable that whatever goddesses were popular at a given time and place were included in the Navadurgās. As popular worship changed, then, so did the lists of the Nine Durgās. The only thing that remained constant was their governing principle, the number nine. Individual members might change in name or appearance, but the group could still be worshipped for the same purposes and with no fear of loss of efficacy.

The same might be said for the Eight Cāmuṇḍas who, as we have seen above, are identical to the Nine Durgās and for Bhadrakālī, who is linked to the Eight Cāmuṇḍās by her iconography and is one of the Nine Durgās according to the *Kālikāpurāṇa* and the *Skandapurāṇa* cited earlier. To interpret these goddesses as members of a group, the composition of which was not necessarily fixed, helps to explain our failure to locate in medieval iconographic sources the many formulae that one might suspect were behind our many individual statues. The appearance of the individual deities and their identity have become less important than their role in a group. To the iconographer, then, it should have been sufficient to list the group of nine or eight figures and unnecessary to describe all possible forms of each member of the group. It remains now to discover what prompted this arrangement of goddesses into groups of eight or nine (eight around a central figure) and to see if these Eight Cāmuṇḍās, Nine Durgās, and with them Bhadrakālī are isolated groups or belong to a recognizable process in Indian iconography.

4. *Directional Symbolism*: Maṇḍalas *of Eight Figures*

The earliest stone *maṇḍala* in India occurs in one of the Buddhist caves at Ellora. It is a *maṇḍala* of the *Aṣṭmabābodhisattvas* or the Eight Great *Bodhisattvas* and is based on *sūtras* like the *Aṣṭamaṇḍalaksūtra* preserved in Chinese (Taishō 20) (40). The Eight *Bodhisattvas* are grouped around a central figure, thus bringing the total number to nine, exactly as in the case of the Navadurgās placed around Ugracaṇḍā or Bhadrakālī. The identity of the central figure of the *Aṣṭamabābodhisattvamaṇḍala* changed as the *maṇḍala* migrated across Buddhist Asia, and in different texts even the names of the *Bodhisattvas* themselves are different (41). The pattern of the eight figures around the central image is of far greater importance than the identity of any one member of the group.

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(39) *Ibid.*

(40) See my article, « A Portable Buddhist Shrine from Central Asia », *Archives of Asian Art*, XXII, 1968-1969, pp. 88-90.

The general pattern of symbolism that underlies the Eight *Bodhisattva Maṇḍala* is directional. A number of Buddhist texts could be cited to prove the importance of directional symbolism in this *maṇḍala* (42). I propose that the very same symbolism operates in the case of the Eight Cāmuṇḍās and the Nine Durgās. Such directional symbolism is deeply rooted in the Indian tradition. It is behind the notion of eight *lokapālas* or guardians of the universe who are stationed at the eight directions: the four cardinal points and the four intermediate points. It is also no doubt the reason for the predominance of groups of eight figures and attendants in *maṇḍalas* described in the various *tantras* such as the *Śāradātilakatantra* 10.74; 11.11, and 11.73, etc., and the *Bhairavapadmāvatīkalpa* 3.19, and numerous other texts.

The Eight *Bodhisattva Maṇḍala* reveals an important feature of such directional *maṇḍalas* as a whole. There would seem to be an indifference to the appearance and even the identity of the individual figures. This *maṇḍala* was worshipped all over Buddhist Asia for the same purposes although its individual members changed. This lack of a fixed list, it is to be recalled, is also a striking characteristic of the Navadurgās, and lack of fixed form rigidly codified by the texts is a characteristic shared by the Eight Cāmuṇḍās and Bhadrakālī, the scorpion goddess. Considering the Navadurgās, Eight Cāmuṇḍās, and Bhadrakālī as participants in a directional *maṇḍala* explains this otherwise anomolous aspect of these goddesses, for in directional *maṇḍalas* an indifference to the appearance of the individual deities is the norm, not the exception. This hypothesis would also account for the lack of correspondences between texts and images in the case of the Aṣṭacāmuṇḍās and the many images of Bhadrakālī: the texts have become more concerned with the pattern than with the individual figures, who, after all, are only important in so far as they participate in the general symbolism. It also explains why the Eight Cāmuṇḍās, Bhadrakālī, and the Nine Durgās could be exchanged for one another or identified with one another with such ease: symbolic role takes precedence over distinct personality and appearance.

5. *Conclusion*

In conclusion, this paper has presented a number of images of a goddess with a scorpion on her belly. It has identified her as Bhadrakālī of the myth of the destruction of Dakṣa's sacrifice. It then related the images of this Bhadrakālī to images of goddesses identified as members of the Eight Cāmuṇḍās. These Eight Cāmuṇḍās were associated with a related group, the Nine Durgās. Both groups and Bhadrakālī with them were finally interpreted as fluctuating groups of goddesses brought together under the influence of directional symbolism. This fact was then used to explain why the appearance of the individual figures is so varied and why the texts do not devote themselves to elaborate categorization of the many individual forms. It was shown that it is the very nature of a directional *maṇḍala* not to demand strict regulation of the identity and appearance of its individual members. The paper, thus, has traced Bhadrakālī from her inception in a specific myth to her transformation into a participant in a general pattern governed by directional symbolism. It has illustrated as well the fact that such a transition was not unique to Bhadrakālī; the Cāmuṇḍās and Durgās, likewise rooted in myth also became members of a symbolic group. This transformation, then, is one process that lies behind the proliferation of medieval Indian deities, and one might expect to encounter it again in the Indian pantheon.

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(41) *Ibid.*, pp. 92-93.
(42) *Ibid.*, pp. 93-94.

A Newly Discovered Early Image of Viṣṇu

by M. P. Joshi

The present Viṣṇu image is situated in the Nakuleśvara shrine in the village of Marsolī, district Pithoragarh, U. P. hills. So far as is known, of all the sculptures found in the U.P. hills it appears to be one of the finest and earliest examples of this art (¹) (fig. 1).

The sculpture has lost the details of some of its original features because of mutilation. However, as may be seen, the standing figure of Viṣṇu wears a *kirīṭa*, an *ekāvalī*-necklace, ear-ornaments, wristlets and a long *vaijayantī*. The only visible traces of drapery are the artistically arranged folds of the *dhotī* between the feet of the god. The four-armed deity holds a *śaṁkha* in his front left hand which is slightly broken; his back left hand is placed over the head of a standing two-armed human figure that may be identified with *Chakra-puruṣa* for he wears an elaborate *chakra*-shaped head-gear, such as is usually found in such representations (²). The corresponding right hand of the deity is held over the head of another two-armed standing human figure. Although its mutilation is so complete that nothing can be said about its sex, however, the clue to its identification is again the upraised head-dress which is apparently one of the ends of a mace, and hence the figure may be identified as *Gadā-devī* (³). The front right hand of the god is broken, but it seems to have held some object (?).

The extant details show an artistically executed sculpture of red sandstone measuring approx 67 cm. in height. It comes under the *sthānaka* variety of the Viṣṇu image and conforms to the description of the four-armed Viṣṇu image in

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(*) The author was generously assisted by his colleague Mr R.C. Pandey, Head of the Physics Dept in the Govt College, Pithoragarh, in the preparation of the photograph reproduced here.

(¹) For details see M.P. Joshi, *Almora and Pithoragarh Temples: Their Architecture and Iconography*, Thesis, Lucknow University, 1971, pls. XIX-XXXVII and figures; cf. K.P. Nautiyal, *The Archaeology of Kumaon* (including Dehradun), Varanasi, 1969, figs. 29-87.

(²) Cf. J.N. Banerjea, in *Journal of the Indian Society of Oriental Art*, XIII, 1945, pp. 68 ff.; Id., *The Development of Hindu Iconography*, Calcutta, 2nd ed. 1956, pl. XXVIII 2.

(³) *Ibid.*

the *Bṛhatsaṁhitā* (4), the only deviation being the front right hand which does not show the *abhaya* pose.

As may be seen, the plain round halo (5), restrained ornamentation, low cylindrical *kirīṭa* with an ornamental device in front of it above the forehead, and stiff standing pose are some of the features of the present sculpture that are also found in the Kuṣāṇa art of Mathurā (6). However, the proportionate bodily contour with a contemplative serene look and the arrangement of the subordinate figures, and above all the general appearance of the relief compare well with the Viṣṇu image belonging to the Gupta period, such as has been described by Agrawala (7) and Banerjea (8). It may also be noted that the absence of the *yajñopavīta* in the present sculpture is conspicuous as it is one of the very early features (9), while absence of the *śrīvatsa* mark is noticed in many of the Gupta Viṣṇu images (10). Thus it may be noted that the present sculpture combines both pre-Gupta and Gupta features, hence it may possibly belong to the transitional phase from the Kuṣāṇa to the Gupta periods, i.e., the early 4th century (11).

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(4) Ch. 58, v. 34 (Śrī Veṅkaṭeśvara Press, Bombay, Śaka 1874).

(5) It is likely that originally the halo was adorned with scallop-marks, traces of which can still be seen above the *kirīṭa*.

(6) Cf. N.R. Ray, in *The Age of Imperial Unity*, Bombay, 1951, pp. 522 ff.

(7) V.S. Agrawala, in *Journal of the Indian Society of Oriental Art*, V, 1937, p. 124.

(8) J.N. Banerjea, *ibid.*, XIII, p. 69.

(9) C. Sivaramamurti, in *AI*, 6, 1950, p. 24.

(10) Id., *ibid.*

(11) For a detailed account of sculptures belonging to this transitional phase, see J.C. Harle, in N. Hammond (ed.), *South Asian Archaeology*, London, 1973, pp. 231-40.

Source of Gold for Early Gold Coins of India

by UPENDRA THAKUR

I

It is interesting that no specimen of gold coin before the time of the Kuṣāṇas has been found in India though literary sources suggest the Vedic origin of gold currency. We are, however, not sure of the position of gold currency in pre-Kuṣāṇa periods (1). The Kuṣāṇas for the first time issued gold coins presumably due to the extensive volume of trade between India and Rome (2) in the early centuries of the Christian era. Kuzula is said to have encouraged traders to introduce coinage on the Roman pattern (3) to meet the growing demands of the international market. The Romans were also following the same trend, and this led to some amount of uniformity between the currency systems of the Romans and the Kuṣāṇas. It is suggested that there was a certain degree of inflation in the international market in the 2nd and 3rd centuries A.D. which in turn effected changes both in Kuṣāṇa and Roman coinage. The Kuṣāṇas met this situation by maintaining the *dinara* at a constant weight, though in the course of time they had to debase the gold quality, whereas the Romans preserved the quality of their *aureus* but progressively reduced its weight (4).

The Kuṣāṇas were followed by the Guptas whose reign period marks the heyday of numismatic art in India. Taking incentive from the Kuṣāṇas, the

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(1) R.B. Whitehead, *Catalogue of the Coins in the Pañjab Museum,* vol. I. *Indo-Greek Coins,* Oxford, 1914, p. 9.

(2) E.H. Warmington, *Commerce between Roman Empire and India,* Cambridge, 1928, pp. 291, 296-97.

(3) *Ibid,* p. 298; R. Göbl, « Roman Patterns for Kuṣāṇa Coins », *Journal of the Numismatic Society of India,* XXII, 1960, pp. 78-79; R.E.M. Wheeler, *Rome beyond the Imperial Frontiers,* Harmondsworth, 1955, pp. 200-202; D.W. MacDowall, « The Weight Standard of the Gold and Copper Coinage of the Kuṣāṇa Dynasty », *Journal of the Numismatic Society of India,* XXII, 1960, pp. 67-68; etc.

(4) U. Thakur, *Mints and Minting in India,* Varanasi, 1972, pp. 81-82; MacDowall, *op. cit.,* pp. 63-64.

Gupta monarchs issued gold coins in different types and varieties. As we know, Samudragupta issued gold coins of at least six types, some of which are the finest specimens of numismatic art. The tradition was brilliantly maintained by his successors who issued different varieties of gold coins.

The Hūṇa invasion towards the end of the 4th century and in the early part of the 5th century A.D. gave a rude set-back to the economy of the country. The various settlements of the traders in different parts of western and eastern India were completely disturbed, hampering their commercial activities. The stringent economic condition of the period is reflected, though indirectly, in some of the epigraphic records of Skandagupta and of the later Gupta kings, as well as the debased gold currency issued by the former. The brilliant tradition of numismatic art in gold was sharply in decline and was finally given up a few years after the death of Skandagupta (⁸).

This disturbed condition resulting in political instability completely disrupted India's direct trade with the Roman empire from the 7th century A.D. The following century witnessed the conquest of Sind by the Arabs, and their emergence as trading communities in the Persian gulf greatly effected the import of Roman gold into India. These factors were directly responsible for the sharp decline in gold coinage in the successive periods in the eastern provinces.

Thus, after the fall of the Imperial Guptas one no longer comes across the varieties of coin motifs and designs, beautifully executed and artistically perfected. The brilliant style is gone, never to return. Coins were no doubt issued in gold in the early medieval period by the Rajput kings of different dynasties but their number is comparatively small and their quality too debased to warrant any serious notice.

II

Although the number of gold coins issued by the early Indian kings is far less compared to silver (including punch-marked) and copper coins, the gold content of the coins issued by the Kuṣāṇas and the Guptas reveals a much higher percentage than those issued in later periods. The impression one gets from the early gold coins is that under the Kuṣāṇas and the Guptas they were minted in large numbers and there was no paucity of gold. The question, therefore, arises: where did the Kuṣāṇas and the Guptas obtain so much gold that they could issue far more gold coins than their successors, whose gold coins are mostly

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(⁸) U. Thakur, *The Hūṇas in India,* Varanasi, 1967, pp. 224-26, 277.

debased (6). We propose to investigate this problem by working out possible clues which would give a rough idea of the source of gold in early days.

Since remote times gold has been popular in India, which is indicated by the following words used for it in different Indian languages: *son, gser, suvarṇa, Hiraṇya, pown, bungarum, mas, kāñcana, sbwel, run, tibr, zahab, tilla, zir,* etc. (7). Because of its softness, colour, lustre and non-tarnishing quality, gold ornaments have been highly valued. It was then, and is now, largely employed by the richer classes for the purpose of personal adornment or in the ornamentation of sacred buildings, palaces etc. (8). Since early days it has been used for coinage and even when modern international economy has necessitated the removal of the gold standard in coinage, international monetary transactions still presume a backing of gold (9).

At present gold in small quantities is recovered from the mines in Mysore and some other places. Modern methods of mining gold ore were adopted towards the last quarter of the 19th century, when most of the ancient workings were surveyed and found to be unprofitable excepting the Kolar gold mine in Mysore, the Hutti gold field in Hyderabad and the North Anantpur field in Madras. The Kolar gold field was found to be the richest among them, and more than 99% of the gold now produced in India comes from four mines: Coregum, Champion, Nundydroog, and Mysore in the Kolar gold field (10). The auriferous lodes of the Kolar gold-fields consist of a series of parallel quartz veins which occupy a central position in the belt of Dharwar schists. Although there are several parallel veins, it is on the Champion lode that paying mines have been developed. The attention of the European prospectors was directed to this area by numerous native workings of unknown age, and since operations commenced on a large scale, shortly after 1880, the gold extracted up to the end of 1903 reached a value of nearly 19 million sterlings (11).

Gold is also obtained in Orissa (along streams in the district of Sambalpur, Koraput, Angul and Cuttack); Midnapur, Baghmundi Thana of Purulia district and Bankura (West Bengal); Chhotanagpur, parts of the districts of Manbhum and Singhbhum on the banks of Suvarṇarekhā and its tributaries in Bihar. The Suvarṇarekhā ('gold streak') river, as the name suggests, is well known for the gold content of its sands. After heavy rains the local villagers wash and obtain from the river and stream-stands small quantities of gold (¹²). Gold is also found in Bijnor, Nainital and Garhwal in Uttar Pradesh where the general method of working is the washing of auriferous sands found in the beds of rivers such as Ramaganga, Sukhar Sot, Phike and Khoh in the Nagina Tahsil of the Bijnor district (¹³). In early times gold was obtained by washing alluvium from the Son river close to the southeast border of Garhwal near Kalagarh (¹⁴). Alluvial gold also occurs in Madhya Pradesh in the sands and gravels of many rivers, particularly Son, Deo and Ib (¹⁵).

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(6) For other details, see J.C. Brown, A.K. Dey, *India's Mineral Wealth*, London, 1935, p. 142; M.D.N. Wadia, *Geology in India*, London, 1957, pp. 93 ff.; G. Watt, *The Commercial Products of India*, London, 1908, pp. 565 ff.

(7) *Ibid.*, pp. 565 ff.; V. Ball, *Economic Geology of India*, III, Calcutta, 1905, pp. 173-230, 608-16.

(8) Watt, *op. cit.*, p. 568.

(9) M.D.N. Wadia, *Minerals of India*, Calcutta, 1905, pp. 94-95.

(10) B.N. Sastri, ed., *The Wealth of India*, Pt. IV, Delhi, 1957, p. 164.

(11) Watt, *op. cit.*, p. 567; Wadia, *Minerals of India, cit.*, pp. 94, 96-97.

The occurrence of gold in Chattor district and Ramagiri in Anantpur district in Andhra Pradesh; in the sands of the Himalayan rivers and Simla hills particularly in Bilaspur district, Jammu and Kashmir, the Waynad gold-field in Gudalur of Nilgiri district having old mines, as well as the Bensibetta hill tracts in Gobichettipalayam taluk of Coimbatore district and in some parts of Dharmapuri and Krishnagiri taluk of Salem district in Madras is well known (¹⁶).

Small quantities of gold occur in the river-sands of upper Assam. Although gold occurrences have been recorded from several Assam rivers, the Subarnasiri river-bed was the best gold-producing area in Assam in early days. Maclaren (¹⁷) has exhaustively dealt with the origin of gold mining in Assam where the *Sonwals* carried on the gold-washing industry since remote times. Commenting on his paper, Holland (¹⁸) remarks that the most striking feature of the gold deposits of the Assam Valley is the universal distribution of the metal in small percentages throughout the gravel of the river-beds.

Although vein-gold occurs in limited areas, the distribution of alluvial gold in India is, however, much wider. Alluvial gold-washing has been carried on since remote times in the sands and gravels of many of the rivers of Madhya Pradesh, Uttara Pradesh, Bihar, Assam and Orissa and in sections of the Indus Valley at Ladakh, Baltistan and Gilgit (¹⁹). The gold and silver thread industry appears to have originated in India in early times; it however, attained great importance

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(¹²) Wadia, *Minerals of India, cit.*, p. 95. Literary evidence also supports mining operations in Bihar a few centuries before the Christian era as Ajātaśatru is said to have quarrelled with the Licchavis on the issue of the share of some jewel mines operated in partnership (H.C. Raychaudhuri, *Political History of Ancient India*, 6th ed., Calcutta, 1953, pp. 211-13).

(¹³) Watt, *op. cit.*, pp. 565-68.

(¹⁴) Sastri, *op. cit.*, p. 166.

(¹⁵) *Ibid.*, p. 166.

(¹⁶) Wadia, *Minerals of India, cit.*, pp. 94-96.

(¹⁷) *Records of the Geological Survey of India*, XXXI, 1904, Pt. IV, pp. 205-32.

(¹⁸) *Ibid.*, XXXII, 1905, p. 140.

(¹⁹) Wadia, *Minerals of India, cit.*, p. 98.

under the patronage of the Mughal emperors and woven fabrics such as *Zardozi, Kalabatun, Qashidah* and *Qalghai* produced in India were renowned all over the world and considerable quantities were exported to Italy, Germany and France. Even at the present time Surat and Varanasi (Benaras) are the main centres of gold and silver production (20).

The present-day production of gold in India has declined to less than 5,000 kg. (175,000 oz) (21).

Thus it can be seen that, though the quantity of gold extracted from these sources is not sizable enough keeping in view its importance in modern economic transactions, yet India had considerable reserves of gold in the early period. Further it may be presumed that in ancient times when labour was cheap, it may have been worthwhile to extract gold from such reserves in huge quantity, which, compared to silver in those days, was much larger and conveniently within the reach of the kings. It may therefore be safely suggested that it was mostly from these indigenous sources that the kings obtained gold in considerable quantity for making coins in the early period. An analysis of the evidences pertaining to the availability of gold of native origin in earlier periods would further support our point.

As noted above, ancient working of gold mines, some of them more than a thousand years old, are extant in Mysore, Hyderabad, Dharwar and other places in South India (22). In Madras, the Wynad gold-field, the Bensibetta Hill tracts, parts of Dharmapuri and Krishnagiri taluk of Salem district are some of the old mines where existence of gold is revealed by many signs of ancient gold-working in diggings, heaps of crushed quartz and stone mortars which have guided the attention of the present workers to the existence of gold (23). In north India also, a few ancient workings have been discovered, particularly in Chhotanagpur in Bihar (24) and also from parts of the districts of Balaghat, Bastar, Bilaspur, Jashpur, Mandi, Raipur and Seoni in Madhya Pradesh (25). Washing for alluvial gold has been practised for a long time in every State and even today there are various places in the country where local inhabitants recover gold in small quantities by this method.

In ancient times the gold mines in Mysore, Hyderabad and Madras were famous for gold production (26). Since early historic times, gold has been supplied to the rest of India from the south, i.e., from Hyderabad, Mysore and Madras. Some of the ancient mines there can still be seen. It seems that the Harappans also got their gold from there, as many of the gold ornaments found at Mohenjodaro and Harappa are alloyed with a substantial percentage of silver and this alloy called electrum is said to be found only in the Kolar gold-fields of Mysore and at Anantapura in Madras and nowhere else. It is possible that some of this gold was collected from the alluvial sand of the river Indus as well (27). In other words, besides the mines, gold was also procured in rich quantity from the river-beds of the Indus and other rivers (28). Ancient deposits of gold were also found in the mountains near the country of Sopeithes in the west of the Jhelum river in the Punjab. Herodotus also testifies that the desert tract to the east of the Indus was quite rich in gold (29). In the east, Assam was famous for its gold washing industry. Even during the time of the Ahoms, the State employed thousands of labourers called *Sonwals* for gold washing work. They paid custom duties to the Government in gold dust. It may be suggested that East Bengal also benefited by the gold-washing industry carried on by the *Sonwals* in the latter's rivers. The antiquity of the gold-washing industry in Assam is also attested by the *Arthaśāstra*, which refers to Suvarṇakuṇḍya famous for gold in Kāmarūpa (30).

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(20) Sastri, *op. cit.*, pp. 176-81.
(21) Wadia, *Minerals of India, cit.*, p. 98.
(22) Sastri, *op. cit.*, p. 164.
(23) Wadia, *Minerals of India, cit.*, p. 96.
(24) Sastri, *op. cit.*, p. 164.
(25) Wadia, *Minerals of India, cit.*, p. 96.
(26) J. Marshall, *Taxila*, Cambridge, 1951, II, p. 620.

We are told that the Indian satrapy paid an annual tribute of 320 talents of gold to Persia as early as the 5th. century B.C. This gold was probably procured from the gold mines said to exist in Sind in the time of Alexander (31). Though the Kolar gold fields lay outside the Kuṣāṇa empire, the Kuṣāṇas might have exploited the gold mines of Dalbhum which was within the sphere of their influence. Stein (32) discusses the gold-digging at Yotkan and mentions the instances where he found gold employed by the artists of the sand-engulfed ruins. These date from the 3rd to 8th centuries A.D. But, while he found gold-leaf extensively employed in the ornamentation of the idols, statuary, etc., he makes no mention of having come across examples of fabric with gold wire (thread).

We have some references in the Old Testament also. The products mentioned in the account of the Ophir trade are gold, silver, precious stones, ivory,

(27) O.P. Jaggi, *Dawn of Indian Technology*, Delhi, 1969, p. 114.

(28) Strabo, *Geography*, (ed. Meineke, Leipzig, 1866-67), XV 1.69 (trans. H.C. Hamilton, W. Falconer, London, 1854-57; trans. W.J. Mac Crindle, *Ancient India as Described in Classical Literature*, Westminster, 1901).

(29) Mac Crindle, *op. cit.*, p. 3; A.N. Bose, *Social and Rural Economy of Northern India*, I, Calcutta, 1942, pp. 219.

(30) Mac Crindle, *op. cit.*, pp. 3 ff.

(31) Strabo, *op. cit.*, XV 1.34.

(32) Stein, *Ancient Khotan*, Oxford, 1907, pp. 192-94, 210, 224, 381, 496; Watt, *op. cit.*, p. 568.

sandalwood, apes and peacocks. If Max Müller and others be correct in identifying India with the Ophir of the Scriptures, the present production is possibly only a tenth part of what it was. According to Napier (*Metallurgy of the Bible*) King David derived, through the trade of Ophir, gold to a valuation of £ 600,000,000 (33). According to some scholars Ophir resembles Ābhira (34), but Lassen identifies it with the Indian city, Sophir (Suppārā). Another Indian name resembling Ophir is Sauvīra (35). Others, however, fix Ophir on the Arabian coast of the Persian Gulf, but admit that it was a trading centre dealing with India. As most of the commodities mentioned in the scripture are of Indian origin and their names clearly derived from Sanskrit words (36), it would imply that India exported gold in the early period. Pliny also speaks of Indian gold coming from the country of the Nareae (the Nayars of Malabar), and thus practically the Mysore mines (37). Another reference in the Old Testament says that King Solomon's (963-923 B.C.) "navy of Tharshish" brought him every three years ivory, gold, silver, apes and peacocks. As most of these articles are of Indian origin it would further support export of Indian gold a few hundred years before the Christian era.

That India was rich in gold is also attested by the *Indika* of Megasthenes which says: « While the soil bears on its surface all kinds of fruits, which are known to cultivation, it has also underground numerous veins of all sorts of metal, for it contains much gold and silver, and copper and iron in no small quantity, and tin and other metals, which are employed in making articles of use and ornament, as well as the implements and accoutrements of war » (38). This observation is also supported by the eminent geologist V. Ball, who quotes the statement of Megasthenes as being absolutely true (39). As noted above, Strabo (40), on the testimony of Gorgon, says that good mines of gold and silver existed in other mountains not far from the Salt Range in the Punjab. Hsüan-tsang also speaks of gold and silver as the natural products of India (41), and refers specifically to gold along with silver as being available from Satadru (42) (River Sutlej), Bolor (43) and Takka (44). Sulaiman (45) and al-Masʿūdī (46) also refer to gold and silver mines in the kingdom of Kanauj as well as in the kingdom of Rahma (47) which has been wrongly identified by some scholars with the Pāla kingdom (48). As Bengal is not known to have gold and silver, it is rightly suggested that the Arab accounts of Rahma have jumbled Bengal with Lower Burma and Pegu where these metals were found in large quantity in early days (49). In Lower Burma the district of Mergui was one of the richest in alluvial gold in the world (50). Reference to gold mines is also found in the *Āin-i-Akbarī* (16th century) of Abul Fazl (51). According to Antonises, « traders in India tell us that the Indians give their own wares in exchange for those of the Greeks without employing money, even though they have gold and copper in abundance » (52).

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(33) Watt, *op. cit.*, p. 568.

(34) L. Gopal, *Chronology of the Punch-marked Coins*, Varanasi, 1966, p. 73.

(35) *Ibid.*, p. 73.

(36) W.H. Schoff, *The Periplus of the Erythraean Sea*, London, 1912, p. 175; R.C. Majumdar, A.D. Pusalker, *The Age of Imperial Unity*, Bombay, 1955, p. 612.

(37) Watt, *op. cit.*, p. 568.

(38) Mac Crindle, *Ancient India as Described by Megasthenes and Arrian*, London, 1887, p. 30.

(39) V. Ball, *Economic Geology of India*, Calcutta, 1905, Introd. p. XV; *Journal of the Society of Arts*, 1882, p. 582.

(40) Strabo, *op. cit.*, XV 1.30; Mac Crindle, *Ancient India as Described in Classical Literature, cit.*, p. 38.

(41) S. Beal, *Buddhist Records of the Western World*, vol. I, London, 1884, new ed., 1906, p. 89.

III

Besides the local sources, much gold was brought to the Kuṣāṇa kingdom from the Oxus region, which occupied a very advantageous position for procuring gold from places outside the Kuṣāṇa empire. Moreover, the Kuṣāṇas imported gold not only from Scythia (which now forms part of South Russia between the Carpathians and Caucasus) but also from the Ural and Altai regions (53). The classical writers have referred to a legend about the gold-digging ants which is connected with the import of gold into India by some aboriginal tribes of ancient India (54). The *Mahābhārata* also mentions the gold-digging ants as *pai-*

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(42) *Ibid.*, p. 178.

(43) Beal, *op. cit.*, p. 135.

(44) *Ibid.*, pp. 165 ff.

(45) H.M. Elliot, J. Dowson, *History of India as Told by Its Own Historians*, London, 1867-77, vol. I, p. 4.

(46) *Ibid.*, p. 4.

(47) Ferrand, *Textes*, Paris, 1913-14, pp. 44, 105.

(48) R.C. Majumdar, *History of Bengal*, Dacca, 1943, vol. I, p. 122.

(49) G. Coedès, *Histoire ancienne des états hindouisés d'Extrême-Orient*, Hanoi, 1944, p. 135; Gopal, *Chronology...*, *cit.*, p. 74.

(50) Nisbet, *Burma under British Rule and Before*, London, 1901, vol. I, pp. 347, 397; *Records of the Geological Survey of India*, XXV, 1892, p. 129; XXVI, 1893, pp. 7, 48, 163; XXVII, 1874, Pt. I, pp. 10-11, 117, 122-23; XIX, 1886, Pt. IV, pp. 268 ff.

(51) B.K. Sarkar, *Positive Background of Hindu Sociology*, Allahabad, 1914, p. 97.

(52) Pausanias, III, xii 3.

(53) G.L. Adhya, *Early Indian Economics*, Bombay, 1966, p. 180; U. Thakur, *Mints and Minting in India*, Varanasi, 1972, p. 83.

(54) Arrian, *Anabasis*, Leipzig, 1907, XV 6; Thakur, *Mints...*, *cit.*, p. 83.

palika (55). We are further told that the gold-seekers of India also brought gold from Suvarṇabhūmi (South-East Asia) (56).

It has been suggested by some scholars that there is no archaeological proof to support the view that the Kuṣāṇas obtained their gold from Central Asia, for the Hermitage Museum in Leningrad does not contain any gold object of Kuṣāṇa times (57). We fail to understand how the non-existence of Kuṣāṇa gold coins or objects in the above Museum would explain the fact that the Kuṣāṇas did not obtain gold from Central Asia. It is not necessary that Kuṣāṇa gold coins should be found in the Museum under reference when we know that even in India Kuṣāṇa gold coins are not to be found in most of the famous museums.

According to Western scholars, some of the gold coins of the Kuṣāṇas were minted out of the Roman gold received through trade from the Roman traders (58). The Romans in turn obtained their gold from Africa and also the Caucasus area and the supply from Africa did not stop until the Muslim invasion in the 8th century A.D. The Kuṣāṇas maintained close contacts with the Roman empire whence they obtained gold as a result of the trade through the Silk Route which passed through their empire (59). The above facts would clearly demonstrate that while much gold was available in the native mines, gold was obtained from outside during this period mostly through trade, which facilitated smooth coining in gold during the Kuṣāṇa period and later (60).

Although the Gupta empire carried on trade with the eastern Roman empire, the volume of trade was considerably less than what India had with the eastern Roman empire during the 1st century A.D. The Guptas might have obtained gold from the eastern part of the Roman empire through trade and also from China and South-East Asia. They also procured some gold from the South Indian gold-fields, the high period of whose working corresponds with the first two centuries of the Christian era (61). Samudragupta might have got gold from Assam and other local mines as well as from the South Indian kings who were in possession of the famous Kalar mines. Besides this, gold was also available in large quantity from the merchants who were settled on the western coast and imported gold from the West, particularly Rome, which found its way into the central and eastern parts of the country by way of trade-routes. These merchants usually carried their merchandise from the eastern parts of India into the island countries in the eastern archipelago by sea (62).

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(55) W.W. Tarn, *Greeks in Bactria and India*, Cambridge, 1938, pp. 100-108.

(56) *Ibid.*, pp. 107-108; Bose, *op. cit.*, p. 219.

(57) *Journal of the Numismatic Society of India*, XXXI, 1969, p. 2.

(58) A. Cunningham, *Coins of the Indo Scythians*, London, 1888-92, p. 38; E.J. Rapson, *Indian Coins*, Strasburg, 1897, pp. 17-18; Wheeler, *op. cit.*, pp. 169-79; Thakur, *Mints...*, *cit.*, p. 84.

(59) *Journal of the Numismatic Society of India*, XXXI, 1969, p. 3.

(60) Thakur, *Mints...*, *cit.*, p. 84.

(61) F.R. Allchin, in *Journal of the Economic and Social History of the Orient*, V, 1962, p. 211.

The Roman traders are said to have imported gold in the shape of coins into the Tamil region to purchase the local commodities. The *Periplus* also refers to a large number of Roman gold and silver coins as well as silver and gold plate being imported into the market-towns of Barygaza, Muziris and Nelcynda (63). From the Tamil poems of the Saṁgama age (earlier Christian era) we learn that the Yavanas imported gold into Muziris and other parts of the Tamil land (64). The Tamil literature further reveals that trade in pearls with foreign countries was conducted by the Tamils exchanging pearls and other articles of commerce with gold and other rare articles (65). The Tamil poem *Maduraik Kānchī* says that the merchants used to take pearls and gold from the Pāṇḍyan kingdom and sell them in the countries where they were scarce (66). The lure of pearls from South India drained the Roman empire of at least 55 million sesterces (nearly a million pounds) (67) a year, which is attested by the discovery of several Roman gold coins in the Tinnelly district of Madras and elsewhere (68). From the Tamil Poem *Silappadhikāram* (Canto V) we further learn that Maruvurpakkam, situated near the seaside beach of Kaveripattinam, was inhabited mainly by traders in corals, pearl, gold and other precious stones (69). According to Pliny and Tacitus, the flow of Roman currency into India was in exchange for its commercial products (70). While most of the imported coins were employed as currency, they were used only as bullion to be weighed out in exchange for goods or silver and gold ornaments (71). It is also possible that some of these Roman gold coins were turned into fresh gold coins both by the Kuṣāṇas and the Guptas (72).

Numismatic evidences also support the above view. The debasement of Roman gold coins during the period of Nero and the non-availability of old genuine Roman gold coins in the Indian market resulted in sharp dwindling in the volume of trade between Rome and India in the succeeding period. This process was further accelerated by the restrictions imposed on the export of gold by Vespasian of which we get an echo in Pliny's accounts (73). We are told that after Vespasian, the Roman traders preferred the markets of Surāṣṭra to the Tamil region. Warmington (74) suggests that while there was a partial cessation of Roman trade in Tamil land, « the change was not in the nature or scope of trade but in the medium of exchange », as after Vespasian, with the stoppage of the export of gold, the exchange of goods between the Tamils and the Romans was carried on through barter.

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(62) Thakur, *Mints...*, *cit.*, pp. 87-88.
(63) Schoff, *op. cit.*, pp. 39, 42, 49, 56; Warmington, *op. cit.*, pp. 276-79.
(64) Kannakasabhai Pillai, *Tamils Eighteen Hundred Years Ago*, Madras, 1904, pp. 25-27.
(65) M.S. Shukla, *Gem Industry in Ancient and Medieval India*, Varanasi, 1972, p. 34.
(66) Kannakasabhai Pillai, *op. cit.*, p. 31.
(67) Shukla, *op. cit.*, p. 35.
(68) Wheeler, *op. cit.*, p. 34.
(69) For details, see *ibid.*, pp. 34-44.
(70) Pliny, XII 41; Tacitus, *Annals*, III 53.
(71) Wheeler, *op. cit.*, p. 167.
(72) Cf. R.M. Cimino, F. Scialpi, *India and Italy*, Rome, 1974, pp. 31-32.

Besides Rome, gold was also obtained from other sources. It would appear from the account of Abu Zaid that formerly India used to get dinars, called *sindiat* (probably minted in Sind), emeralds from Egypt, and coral and *dahnaj* (a stone resembling emerald). But the cessation of trade in these articles soon stopped the flow of gold from the West as the latter had found another profitable item of export to India (75), i.e. the horse, which was increasingly required for use in war by the Indian kings (76). This naturally caused a serious drain on the gold reserve of the Indian kings who had to pay in gold for the purchase of Arab horses at exorbitant rates. We can get an idea of this regular drain from the fact that by the 12th and 13th centuries « this trade had reached astounding heights » (77), and according to Wassaf (78), each horse cost 220 *dinars* of "red gold" (= 550 *saggi* of Marco Polo = 550/6 oz) (79) and the total number of horses which Ma'bar, Kambayat and other ports received was 14,000 costing 22,000,000 *dinars* for the Pandyan kingdom alone. According to Marco Polo (80), each of the Pandyan kings purchased every year 2000 horses at the rate of 500 *saggi* (= 500/6 oz) of gold per horse. He further observes that each horse from the Persian Gulf was sold at 200 livres of Persian money (£ 193 according to Yule) (81).

China was yet another country from which gold was obtained by Indian merchants and traders. From the accounts of Marco Polo we learn that India received clothes of silk, and gold as well as "sandals" (a silk textile) from China (82). An inscription of the seventh year of the reign of Rājendra (A. D. 1019) discovered in Tanjore, speaks of an endowment in terms of Chinese gold made by a certain merchant (83). Besides this, fifteen coins discovered at Tanjore representing almost the entire Śuṅga period, show that the Arabs could not wrest from India, especially its southern parts, its share of the Chinese trade howsoever it might have dwindled (84). A South Indian envoy sent to China during the reign of Hsüan-wu (A.D. 500-516) is said to have reported to the Chinese emperor that his kingdom produced diamonds, gold, copper, iron, etc. (85). It is important to note in this connection that in 1296 A.D. the Chinese attempted to prohibit the export of gold and silver and limit the value of the trade with Ma'bar (Coromandel), Keelam (Quilon) and Fandaraina (Pantalayini Kollam) to a relatively small sum of money. A Tamil inscription of the early years of the 11th century indicates that South India was receiving Chinese gold during this period probably through Indonesia (86). From the Arab accounts we learn that rhinoceros horns exported from Rahma to China sometimes fetched 2,000 or even 4,000 *dinars* each (87). A business magnate of Anhilvāḍa is said to have returned from a foreign land with a sum of four crore of gold pieces. Similarly foreign merchants coming to Cambay brought with them gold and silver (88). According to Tavernier (89), China sent silver in exchange for silk and gold from river-washing from Assam and Northern Burma.

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(73) Pliny, XII 41; VI 101.

(74) *Op. cit.*, pp. 392-94.

(75) Elliot, Dowson, *op. cit.*, vol. I, p. 11.

(76) For details, see L. Gopal, *The Economic Life of Northern India*, (*700-1200 A.D.*), Delhi, 1965, pp. 153-54.

(77) *Ibid.*, p. 153.

(78) Elliot, Dowson, *op. cit.*, vol. III, pp. 33-34.

(79) Yule, *Marco Polo*, London, 1903, II, p. 349 note.

(80) *Ibid.*, p. 340.

(81) *Ibid.*, I, p. 83.

(82) *Ibid.*, II, p. 390; I, pp. 24, 132, 152, 157, 176, 181.

A brisk trade with Suvarṇabhūmi (South-East Asia) also fetched much gold from different countries such as Java, Sumatra, Campā, etc. Marco Polo says that the foreign merchants coming to Cambay brought with them, besides other things, gold, silver, copper, etc. The ships coming to Malabar from the east brought copper in ballast as well as gold and silver (90). It was the lure of gold which had attracted the Indians to these islands. This is also reflected in a Gujarati traditional verse which says that he who goes to Java (Javadvīpa famous for gold) never returns and, if ever he returns, he brings back enough money to live on for two generations (91). In old Bengali songs, Campā is the city whence traders and merchants started out for their coastal trade along the course of the Gaṅgā and the sea. The epithet "the product of Suvarṇadvīpa", applied to gold in the *Vaijayantī* (92), would imply the export of gold from Suvarṇadvīpa to India » (93). From a story in the Jaina text *Samarāiccakabā* (94), we learn that Indian merchants while returning from Suvarṇadvīpa used to bring with them blocks of gold marked with their names. The *Tilakamañjarī* says that one could see in the islands many mines of gold, gems and silver and also abundance of pearls in the heaps of oysters piled in enormous quantity and gold and silver « were neglected as if equal to dust » (95). Making allowance for exaggerations in these accounts, it can however be said that South-East Asian countries were quite famous for their wealth in those days where merchants flocked from India and other countries to earn more and more gold through sale of their merchandise, which is also attested by the *Jātaka* stories.

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(83) *Journal of the Numismatic Society of India*, XX, 1958, p. 13.

(84) Gopal, *The Economic Life...*, *cit.*, pp. 135-36.

(85) Shukla, *op. cit.*, pp. 1 ff.

(86) *Journal of the Numismatic Society of India*, XX, 1958, p. 13.

(87) Ferrand, *Textes*, Paris, 1913-14, pp. 44, 105.

(88) Yule, *Marco Polo*, *cit.*, II, pp. 395, 398.

(89) III 16; Schoff, *op. cit.*, p. 259.

(90) Yule, *Marco Polo*, *cit.*, II, p. 390.

(91) A.K. Forbes, *Rāsa Mālā*, London, 1877, p. 418; Gopal, *The Economic Life...*, *cit.*, p. 159.

(92) *Vaijayantī* of Yādavaprakāśa, ed. G.Oppert, Madras, 1893, pp. 42, 21.

IV

As regards the antiquity of gold coins in India, archaeology unfortunately does not offer much positive information. In spite of literary and sculptural representations no actual gold coins have been discovered from excavations so far. Curiously enough, no gold coins of the time of - the Nandas, traditionally believed to have amassed fabulous wealth in the form of coined money, or of the Śuṅgas, who performed Aśvamedha sacrifices in which gold coins were required to be given as *dakṣiṇā* to the officiating priests, have been found. Though Puṣyamitra Śuṅga is credited with having announced an award of one hundred gold coins to a person for severing the head of a Buddhist monk, not a single specimen of his time has come to light.

As regards the gold objects, a few objects of the prehistoric and historic periods have come to light in the course of excavations. These include mainly gold diadems belonging to the prehistoric age in Tinnevelly (96), gold objects from Chārsada (97) as well as beautiful Buddhist jewellery from Haddā and Dīh Bīmāran (Afghanistan), Pipravā in Nepal and Bhattiprolu in Madras (98). Other objects include three pieces of ear-rings of solid gold of first-rate workmanship whose shape is similar to that of a pair of bracelets worn by one of the figures of the Ajaṇṭā cave paintings, each having a gold coin attached to it belonging to the Kuṣāṇa king Huviṣka (99) and gold caskets with incrustation of gems. But no gold objects from Harappā, Sirkap (Taxila), Rupar, Brahmagiri and other important archaeological sites have come to light. The epigraphic records of the early and early-medieval period, however, abound in reference to gold coins and gold objects.

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(93) Gopal, *The Economic Life..., cit.,* p. 156.
(94) *Samarāiccakabā* of Haribhadra Sūri, Bombay, 1938, chap. VI, pp. 38-39.
(95) *Tilakamañjarīkatbā* of Dhanapāla, N.S.P., Bombay, 1903, p. 153.
(96) *ASIAR*, 1902-3, p. 120.
(97) *Ibid.*, p. 172.
(98) *Ibid.*, p. 185.
(99) *Ibid.*, pp. 186-87.

Thus, considering the gold for which India has at all times been famous, and the inordinate fondness shown by the people of the country for personal ornaments, it is surprising that only a few objects of gold or silver jewellery have come down to us from ancient times. Amid the rich collection of Indian antiquities to be found in India, jewellery and gold objects are « represented by a few and for the most part scarcely noticeable objects, the significance of which is most apparent when they are compared with the splendid displays of ancient gold and silver work which Western countries have produced » (100). This comparative scarcity is observable almost as much in the collections of Buddhist as in those of Hindu antiquities, and in both the cases the cause is the same. « Whereas in western countries — thanks to the prevailing custom of burying the personal ornaments of the dead along with their remains — the museums are stocked with the spoils of ancient countries, in India, so far as the Buddhists or Hindus are concerned, there are no such happy hunting grounds for the excavator » (101).

Unlike silver, gold is frequently referred to in early classical literature — the *Vedas*, the *Brāhmaṇas*, the *Upaniṣads*, the *Jātakas*, the epics, the *Smṛtis*, the *Nītiśāstra*, the *Purāṇas*, as well as the epigraphic records — by various names, such as *niṣka, hiraṇya, suvarṇa, pāda śatamāna, purāṇa*, etc., sometimes as the metallic medium of exchange of standard weight and sometimes as gold currency (102). The *Arthaśāstra* also refers to the regular use of gold, describing the methods employed by the goldsmith for the adulteration of gold by substituting baser metals, and prescribes extreme penalty for such adulterators (103). Other Indian literary sources also refer to a regular use of gold. In the *Milindapañho* (104) and works on medicine (*Caraka* and *Suśruta Saṁhitās*) and alchemy, gold is mentioned along with other metals. The *Suvarṇavarṇāvadāna* (105), a Buddhist text of the 4th-5th century A.D., refers to gold as *suvarṇa, kāñcana, amara, cāmīkara* and *kanaka*.

It would be interesting to note that even during the age of Kālidāsa, gold-mines were exhaustively worked, and we get frequent allusions to this in the works of the poet. The mines yielded precious stones (*maṇi*) such as *vajra*

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(100) *Ibid.*, p. 185.

(101) *Ibid.*, p. 185.

(102) For details see Thakur, *Mints...*, *cit.*, pp. 21-48.

(103) *Arthaśāstra* of Kautilya, ed. Shamasastry, Mysore, 1919, II 13.45, 46; Thakur, *Mints...*, *cit.*, pp. 21 ff.

(104) *Milindapañho*, ed. V. Trenckner, London, 1928, p. 331.

(105) Sitaram Roy, *Suvarṇavarṇāvadāna*, Patna, 1971, pp. 162, 169-70.

(diamond), *padmarāga* (ruby), *puṣparāja* (topaz), *mabānīla* or *Indranīla* (sapphire), *marakata* (emerald) etc. (106). Besides silver and copper, gold was also obtained in large quantities from the mines. Kālidāsa gives different names for gold — *suvarṇa, bema, biraṇya, kanaka, kāñcana* and *draviṇa* (107). Gold, which was also extracted from the sand of some rivers (Kanakasikatā) (108), was used for making most of the ornaments. We have also reference to burnished gold (*taptacāmīkara*) (109) which was hammered out into the shape of several beautiful jewels. During this period metals were worked and articles of the finest designs were finished by master goldsmiths (110). Gold was tested in fire (111) before being worked out into ornaments to ascertain its purity. References to ornaments of gold and precious stones of various designs in the works of the poet are a conclusive proof of the fact that much fine jewellery work was successfully executed (112). As regards the gold coins of the Guptas, they are the finest specimens of Indian numismatic art.

That the gold mines had not completely dried up after the 7th century and that some of them were still worked is evident from some of the land-grants of the early medieval period which, while describing the village-boundaries, also mention the mines (113). In the Kadambapadraka grant of Naravarman, dated V.S. 1167 (1110 A.D.) we read of King Naravarman granting land with the right of mining gold (114). The *ākarādbikārapuruṣas* were the officers-in-charge of mines (115). Besides, references to various ornaments of gold, images of Hindu deities made of gold (116), the golden lion-throne (117) and the bedsteads inlaid with gold (118) and gold cups and dishes of the kings and nobles leave no doubt that the country was rich in gold (119) even during the 400 years after the Guptas when no gold coins were issued by the Indian kings.

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(106) Cf. *Ragbuvaṁśa* of Kālidāsa, ed. H.D. Velankar, Bombay, 1948, III 18; XIII 53.59, XVIII 42, XIX 45; *Kumārasambbava* of Kālidāsa, ed. V.L. Sastri Pansikar, Bombay, 1916, VIII 75; I 24; VII 10; XVI 69.

(107) *Kumārasambbava,* VII 59; *Ragbuvaṁśa,* I 10.30; II 36; V 2.29; IV 70; III 79.

(108) *Kumārasambbava,* I 44; VI 5; *Ragbuvaṁśa,* XIV 33.

(109) For other details, see B.S. Upadhyaya, *India in Kālidāsa,* 2nd ed., Delhi, 1968, p. 259.

(110) *Ibid.,* p. 267.

(111) *Ragbuvaṁśa,* 1.10.

(112) Upadhyaya, *op. cit.,* p. 267.

(113) *Epigrapbia Indica,* XI, 1935, p. 22;IV, 1928, pp. 157 ff.

(114) *Ibid.,* XX, 1944, pp. 106-7.

(115) R.S. Tripathi, *History of Kanauj,* Delhi, 1959, p. 343.

(116) *Rājataraṅgiṇī* of Kalhaṇa, ed. M.A. Stein, Bombay, 1892, VII 1083; Elliot, Dowson, *op. cit.,* vol. I, pp. 97-99.

(117) *Mānasollāsa,* Baroda, 1925, III 1046-47.

(118) *Ibid.,* III 1185-86, 1691.

V

The above discussion would show that India was rich in gold since the Rigvedic times and that there was a sizable number of gold-mines both in northern and southern India, the northwestern provinces, Kashmir and other places. As the native supply of gold was by no means small, the so-called paucity of gold resulting in the complete absence of gold coins for over 450 years in north India can not be explained by the fact that it was due to the stoppage of the supply of gold from Rome through trade (120). It was more due to the non-utilization of, or inaccess to, the native sources owing to the disturbed political condition after the Guptas rather than the non-availability of gold itself. The revival of gold coins in the 11th and 12th centuries need not necessarily be connected with developments outside India. As we have shown above, it is basically wrong to suggest that gold-mining does not appear to have flourished in India after the Gupta period (121).

As regards the paucity of gold coins after the Guptas, it may be suggested that during this period the gold coins of the Kuṣāṇas and the Guptas continued to be used, and in the course of time many of these coins were melted down, though some of the kings from the 11th century A.D. onward following the example of Gāṅgeyadeva felt the need for issuing gold coins on the resumption of brisk trade with foreign merchants (122). By this time most of the gold coins came to be surreptitiously hoarded by the merchants and bankers who gradually transformed them into ornaments. The big bankers amassed fabulous wealth in the form of gold and silver as is evident from the contemporary records, literary and epigraphic (123). Lawsly had also noticed such practices in Ceylon where, while trying to collect ancient coins, he was told by the goldsmiths that people came to them to convert their gold and silver coins into ornaments (124). Similar practices were indulged in during the Pāla and Sena periods when ornaments were very popular among the people. Several hoards of ancient coins are reported to have been melted down before they could be seized by the government officials.

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(119) For details, see B.N. Sharma, *Social and Cultural History of Northern India c. 1000-1200 A.D.*, New Delhi, 1972, pp. 139, 149, 152-59; Thakur, *Mints...*, *cit.*, pp. 160-63.

(120) *Journal of the Numismatic Society of India*, XXXI, 1969, p. 6.

(121) Thakur, *Mint...*, *cit.*, p. 6.

(122) Gopal, *The Economic Life...*, *cit.*, pp. 217-18.

(123) Cf. the Deopara Inscription of Vijayasena.

(124) *NumChr*, XV, 1895, pp. 217 ff.

It would not be wrong to suggest that gold coins were used in larger transactions like interstate trade. But, in interstate and foreign trade relations, gold coins were used according to their weight and purity of metal (125). From the mathematical texts of the early medieval period we learn how merchants, by combining gold pieces of different purity and exchanging them for other pieces, obtained profit. This being the case, the kings in the post-Gupta period did not mint fresh gold coins but left it to the big merchants and trading concerns to issue their own gold coins, although theoretically a king reserved the right to examine gold coins struck by the bankers before they were allowed to circulate.

As we know, in the Kuṣāṇa and Gupta periods gold coins were issued in large numbers to meet the requirements of the brisk trade which existed between India, Central and Western Asia, Egypt and Rome. With the comparative decline in the volume of foreign trade in the post-Gupta or early medieval period, the gold coins also became scarce (126).

Another cause for the paucity of gold coins may be found in the non-acceptance of the Indian coins, at least in the Lacca and Maladives islands. It is said that though the islands had foreign money in gold and silver, they preferred bullion. Moreover, foreign coins were not accepted on their face value; on the other hand, they were cut into pieces, their metallic content determined and then their prices fixed, which points to the debasement of Indian coins in later times. Bengal, being the largest customer of cowries, thought it useless to coin money to serve as a standard in foreign trade, as the Indian gold coins proved inferior in quality and content. For instance, one Tahariya dramma could easily be exchanged for one and a half Indian gold coins.

Thus, the decline in the volume of trade with the Roman empire, Central and West Asian countries and Egypt; the shifting of trade-centres of the East Indies to the South; the heavy expenditure incurred by later rulers, such as the Senas, the Palas etc. over maintenance of the army; the rise of a number of independent principalities resulting in the insecurity of internal land-routes; constant warfare among the local rulers as well as the invasions of the Hūṇas (127) leading to the closure of the great international port of Tamralipti and other ports in eastern and western India; the effusion of cowries as a result of new trade contact with the Lacca and Maladives islands; the dependence on agricultural goods through barter and, above all, the uselessness of Indian coins in foreign markets, were all responsible for the great paucity of gold coinage in northeastern India after the exit of the Imperial Guptas from the political scene.

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(125) Gopal, *The Economic Life..., cit.,* p. 238.
(126) *Ibid.,* p. 219.
(127) For details, see Thakur, *The Hūṇas..., cit.,* pp. 132 ff.

The Green Goddess of Tirumullaivāyil

by DAVID SHULMAN

The small village of Tirumullaivāyil, located 13 miles to the west of Madras, is graced by two main shrines — the large Brahminical temple sacred to Śiva as Mācilāmaṇīcuvarar, ᶜthe jewel without flawᵓ; and the nearby folk shrine to Paccaimalaiyammaṉ, ᶜthe Lady of the Green Mountainᵓ. Mācilāmaṇi-Śiva has been present at this spot at least since the time of the *Tevāram*-poet Cuntaramūrtti (9th century?); Chola inscriptions allow us to date elements of the present structure in the 10th century (1). The Paccaimalaiyammaṉ shrine is undoubtedly much more recent; its striking terracotta icons seem first to have been noticed at the beginning of this century (2). Each of the shrines claims its own tradition — that of Mācilāmaṇi existing in written form, that of the folk shrine still unrecorded — and each shrine remains largely oblivious of the other's existence. Yet pilgrims to Tirumullaivāyil often visit both temples before continuing on to the modern shrine of Śrīvaiṣṇavīkoyil about half a mile down the road.

Our primary concern here is with the iconography of the Paccaimalaiyammaṉ shrine and its relations to the larger sphere of South Indian mythology and popular tradition. However, the juxtaposition of the two shrines offers an opportunity to examine the variation in common concepts and motifs on the two distinct levels of Brahminical and folk tradition.

The local names for Śiva and Devī at Tirumullaivāyil appear already in Cuntaramūrtti's *patikam* on this shrine: in his second verse the poet describes how Śiva dances « while Umā of the creeper(-thin) waist looks on » (*kŏṭiyiṭai umaiyavaḷ kāṇa*); and in verse 5 we find an apostrophic reference to the « jewel without flaw » (*mācilāmaṇiye*). Today these titles appear as Kŏṭiyiṭaināyaki and Mācilāmaṇīcuvarar or as their Sanskritized equivalents, Latāmadhyāmbikā (also

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(1) See the introduction to *Cuntaramūrtti cuvāmikaḷ aruḷi ccĕyta tevāra ttiruppatikaṅkaḷ*, Tarumapuram, 1964, p. 30, and the *Annual Report on South Indian Epigraphy*, Madras, 1904, nos. 662-684.

(2) See E. Thurston, *Castes and Tribes of Southern India*, Madras, 1909, VI, pp. 15-16. For a discussion of similar shrines in the vicinity of Pondichéry, see M. Biardeau, « Brahmanes combattants dans une mythe du sud de l'Inde », *Adyar Library Bulletin*, 31-32, 1967-68, pp. 519-30.

Akalaṅkaratnanāyakī, after the god's name) and Akalaṅkaratneśvara. It should, however, be noted that Cuntaramūrtti concludes each of the first ten verses of his poem with an address to « the Pāśupata, the Supreme Light » (*pācupatā parañ cuṭare*); this suggests that the names for the deities at this shrine had not yet crystallized in their present form, and that Tirumullaivāyil, like the nearby Tiruvŏṟṟiyūr (3), may have had an early connection with the Pāśupata sect (4).

The present names for the Tirumullaivāyil deities are connected to a local myth, whose core is already evident in Cuntaramūrtti's 10th verse:

> O lord who graciously revealed himself
> when Tŏṇṭaimāṉ of indescribable glory
> caught his elephant in the jasmine creeper
> and won limitless bliss ... (5).

The later puranic sources from this site give the myth in full as follows: While King Tŏṇṭaimāṉ (or Tŏṇṭamāṉ) was campaigning against his enemies, Kuṟumpaṉ and Kaṇṭaṉ, his elephant became entangled in a mass of jasmine (*mullai*) creepers. The king slashed at the jasmine with his sword; to his astonishment, blood poured forth. Closer inspection revealed a hidden *liṅga* which had been wounded by the king's sword. The king was overcome by sorrow for having struck the deity, but Śiva appeared to him together with the goddess and assured him: « Even if you wound me, I remain the flawless jewel (*mācilāmaṇi*) ». The king built a shrine for the deity revealed in this manner (6).

Sometimes the king's enemies Kuṟumpaṉ and Kaṇṭaṉ are said to be Jains who possessed precious specimens of *ĕrukku*-wood; after defeating these chieftains with the aid of Śiva's troops led by Nandin, Tŏṇṭaimāṉ fashioned two pillars for the *sannidhi* of Śiva out of the *ĕrukku*-wood (7). Because the *liṅga* was wounded by Tŏṇṭaimāṉ's blow, no *abhiṣeka* is performed on it to this day; instead it is simply covered with sandal paste.

Does the Tirumullaivāyil tradition retain the memory of a violent historical struggle between Jains and militant Śaivas in the Tŏṇṭai region? There is no way of knowing with any certainty, although there is nothing inherently improbable in the story: there is considerable evidence of Jain activity in the Tŏṇṭai and South Arcot regions in the *Tevāram* period, during which the traditions of many shrines began to take on their essential form (8). What can be stated definitely is that the central motif of the myth — the revelation of the deity through violence done to his symbol — is part of a very widespread pattern in the origin-myths of Tamil shrines. The king's wounding of the *liṅga* is depicted in a painted mural, perhaps from the Nayak period, inside the Mācilāmaṇi shrine (see fig. 1): here we behold the elephant trapped in the jasmine, which the king is attacking with his sword; in the adjacent scene the remorseful Tŏṇṭaimāṉ prostrates himself before the revealed deities (on the left, Kŏṭiyiṭaiṇāyaki; on the right, Mācilāmaṇīcuvarar). The scene recurs in the *gopura* sculptures and a relief carved on one of the supporting pillars in the small stone *maṇḍapa* between the main shrine and the folk shrine of Paccaimalaiyammaṉ.

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(3) See T.V. Mahalingam, « The Pāśupatas in South India », *Journal of Indian History*, 27, 1949, p. 47.

(4) The poet was, in fact, coming from Tiruvŏṟṟiyūr when he visited Tirumullaivāyil, and he mentions his troubles with his wife Caṅkili in Tiruvŏṟṟiyūr in verse 3 of the Tirumullaivāyil *patikam* (no. 69: pp. 566-75 of the edition cited in n. 1).

(5) *Cŏll arum pukaḻāṉ tŏṇṭaimāṉ kaḷiṟṟai ccūḻ kŏṭi mullaiyāṟ kaṭṭ' iṭṭ' ĕllaiyl iṉpam avaṉ pĕra vĕlippaṭṭ' aruḷiya iraivaṉe*... (Ibid., p. 574).

(6) The story is told in a notice printed by the Tirumullaivāyil temple (*Tiruppaṇi veṇṭukoḷ*, n.d.); see also R.K. Das, *Temples of Tamilnad*, Bombay, 1964, p. 257; G. Oppert, *On the Original Inhabitants of Bharatavarṣa or India*, Westminster, 1893, pp. 246-8; W. Taylor, *A Catalogue Raisonée* [*sic*] *of Oriental Manuscripts in the Library of the* (*late*) *College, Fort Saint George*, Madras, 1862, III, pp. 41-42. A *Tirumullaivāyirpurāṇam* exists but has unfortunately not been available to me.

(7) See the versions of Das and Oppert cited in n. 6.

We must note two important facets of the myth — the symbolism of shedding the god's blood, and the striking use of colours to suggest an underlying level of meaning. In shrine after shrine we find that the deity is said to have been discovered when his symbol, the *liṅga*, was wounded and his blood made to flow in a startling manifestation of the sacred presence. At Tirunĕlveli, for example, the god Śiva (Nĕllainātar) was revealed when a shepherd chopped down a thicket of bamboo and thus caused, to his amazement, a river of blood to flow from the hidden divinity (9). At Tiruvāṭpokki a king, given the Sisyphean task of drawing water for the deity with a bottomless golden pot, becomes angry and strikes the *liṅga* with his sword; blood gushes forth, and only the king's threat of suicide draws Śiva from out of the *liṅga* and makes the bleeding cease (10). At Ceyūr (like Tirumullaivāyil, a shrine of the Tŏṇṭai region), the Chola king pierces an ant-hill with an arrow; when blood pours from the ant-hill, the king orders his men to excavate the mound and finds within a hidden *liṅga* (11). Nearby Tirupporūr tells a similar story: a peasant strikes with his axe an ant-hill at the base of a palmyra tree, and the flow of blood from the ant-hill reveals the god (12). Examples could easily be multiplied from shrines all over the Tamil area. Very often this theme is connected to the stock figure of the Kāmadhenu, the divine wishing-cow which arrives at the shrine, pours milk over the hidden *liṅga*, and then accidentally kicks or otherwise wounds the god (13). In the Kāmadhenu variants, as in many of the others (14), one observes a recurrent conjunction of blood and milk (hence of the colours red and white) in the origin-myths of the shrines. The two fluids seem necessarily to mingle in order for the sanctity of the shrine to be complete. While this conjunction may recall the coupling of *śoṇita* and *śukra*-seed in Tantric ritual (15), or the more general belief that a child is conceived from the mingling of the woman's red seed (often identified with the menstrual blood) and the man's white seed (16), the fundamental notion seems to be that of the birth of the divine seed through blood-sacrifice. The symbolism of the sacrifice lies at the heart of the South Indian temple myths which describe the wounding of the deity; the association of blood and milk in these myths suggests the basic sequence of the sacrifice, in which the life of the victim (blood) is exchanged through a violent act of destruction for a new, more powerful birth (milk or seed). The white milk of the Kāmadhenu is one of a series of allotropes (including *amṛta*/Soma, butter, mead, cream, rain, and light), all of which have close links to the idea of the divine, creative seed (17). The role of blood as the final indicator of sanctity is a diagnostic feature of South Indian mythology in contrast to the Northern tradition, where blood has a more strictly polluting value. In the classical Brahminical sacrifice, the victim was strangled so as to prevent the pollution of the sacrificial arena by its blood; but in the South Indian temple-myths, the *appearance* of the god's blood is usually the crucial moment of revelation. The original idea was, no doubt, that of the god's death and rebirth through the sacrifice; that this idea has been veiled in the Tamil myths is the result of the medieval theologians' reluctance to allow their god to die (18).

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(8) Compare the stories of the *Tevāram*-poet Tiruñāṉacampantar's campaigns against the Jains further south, in the Maturai region: *Pĕriyapurāṇam* of Cekkiḻār, Madras, 1970, 6.1.736-883.

(9) *Tirunĕlvelittalapurāṇam* of Nĕllaiyappa Piḷḷai, Tirunĕlveli, 1869, 60.1-145. A similar story is told at nearby Cucīntiram (Sucīndram): see K.K. Pillay, *The Sucīndram Temple*, Madras, 1953, p. 91, n. 8.

(10) *Irattiṉakiri ĕṉṉum tiruvāṭpokkippurāṇam* of Kamalainakar Vaittiṉātatecikar, Madras, 1911, 11.1-270.

(11) *Ceyūrttalavaralāṟu* of Cĕyyur Muttaiya Mutaliyār, Madras, 1944, p. 31; cf. Das, *op. cit.*, p. 214.

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(12) *Tirupporūr ttalapurāṇa carittira ccurukkam, śrī citamparacuvāmikaḷ paramparai ccurukkam mutaliyaṉa* of Puracai Aṣṭāvatāṉam Capāpati Mutaliyār, Tirupporūr, 1934, pp. 76-77, 81-82.

(13) See, e.g., *Tirupperūrppurāṇam* of Kacciyappamuṉivar, Madras, 1930, 8.1-85, 9.1-112; *Śrīnāgeśakṣetramāhātmya*, Madras, 1935, 5; *Tiruvāṉmiyūr stalapurāṇavacaṉam* of Rā. Vicuvanātaṉ, Madras, 1966, 9 (pp. 29-33); and see the discussion in D. Shulman, « The Serpent and the Sacrifice: An Anthill Myth from Tiruvārūr », *History of Religions*, 18, 1978, pp. 107-37.

(14) E.g. the myths from Tirunĕlveli and Cucīntiram cited in n. 9 above.

(15) See M. Eliade, « Spirit, Light, and Seed », *History of Religions*, 11, 1971, p. 11.

(16) See W.D. O'Flaherty, *The Origins of Evil in Hindu Mythology*, Berkeley, 1976, p. 340.

(17) *Ibid.*, pp. 331-46. These correspondences are often expressed in South Indian temples by identifying the *liṅga* — the locus of the divine seed — with other items in the series. For example, at Cikkal the *liṅga* is said to have been formed from cream, and the god is therefore known as Navanīteśvara, 'lord of fresh butter'. At Tiruvāṉmiyūr Śiva is Pālvaṇṇanātar, 'lord with the colour of milk'. At Tirukkūvam the *liṅga* becomes white when there is an abundance of rain, red when war breaks out: *Tirukkūvappurāṇavacaṉam* of Tiruvicainallūr Ciṉṉanāyakar, Madras, 1910, introduction, p. 2.

It is very striking that the red-white colour scheme is also present at Tirumullaivāyil, albeit in a specific local form: here the red blood of the god soaks the white flowers of the jasmine (19). The white jasmine has replaced the more usual symbols of milk or seed. The colour-symbolism at work here may, in fact, go considerably deeper. Brenda Beck has pointed to the correlation of heat and colour in South India; white has a "cooling" value in relation to the hot red, and it is customary to "frame" a ritual wherein heat (as fire, blood-sacrifice, etc.) plays a central role by a cool border of white (20). The white jasmine (*mullai*) which gives its name to the village of Tirumullaivāyil thus provides the setting within which the divine sacrifice can safely be accomplished. Moreover, the association of blood, white flowers, and the hidden *liṅga* at Tirumullaivāyil may also serve as another instance of the universal colour-triad observed by Victor Turner, in which we find red (indicating vitality as well as bloodshed), white (milk, semen, life), and a usually hidden dark or black (death, the unknown, the chaotic — perhaps also, we may add, the divine) (21).

If the notion of sacrifice thus provides an underlying structure of meaning in the tradition of the Tamil Brahminical shrine, we might wonder whether the nearby folk shrine offers a similar scheme. Is this inheritance of sacrificial concepts peculiar to the Brahminical tradition in South India, with its corpus of ritual and mythological texts drawing directly from Vedic sources? Or has the sacrifice achieved a much wider diffusion in the area, incorporating, perhaps, non-Brahminical, indigenous elements in its localized cult forms? We have already noted that the symbolic value of blood appears different, even in the Brahminical shrine, from the standard North Indian view; and it will be argued below that sacrificial themes are, indeed, present in the Paccaimalaiyamman̲ shrine through the associations suggested by the folk icons. Most prominent here are the idea of the remnant (the extra element separated from a series) and the symbolism of the serpent and the horse, which appear together at the periphery of the sacred compound. These ideas appear in close connection with the concept of marriage, especially the marriage of the god and the goddess, in which the male is thought to sacrifice his own vital power to his wife in the process of producing a new birth from her womb.

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(18) For a more detailed discussion of this development, see D. Shulman, « The Murderous Bride: Tamil Versions of the Myth of Devī and the Buffalo-demon », *History of Religions*, 16, 1976, pp. 120-46, and my article cited in n. 13 above.

(19) As an additional white substitute for milk/seed at this site, we have the temple pillars made from the *ĕrukku* plant, which has milky leaves; see above. Jasmine also serves as a symbol of whiteness in the Kannada poems of the Vīraśaiva saint Mahādēviyakka, who sings to Mallikārjuna, 'the lord white as jasmine': see A.K. Ramanujan, *Speaking of Siva*, Harmondsworth, 1973, pp. 111-42. *Mullai* is the *sthalavṛkṣa* of Tirumullaivāyil, which calls itself in Sanskrit *mālatīvana* (*mālatī = Jasminum grandiflorum*).

(20) B.E.F. Beck, « Colour and Heat in South Indian Ritual », *Man*, 4, no. 4, 1969, pp. 553-72.

(21) See V. Turner, *The Forest of Symbols*, Ithaca, N.Y., 1967, pp. 85-90; A. Hiltebeitel, *The Ritual of Battle*, Ithaca-London, 1976, pp. 71-4.

The central myth of the Paccaimalaiyammaṉ shrine is a simple variant of the myths of divine marriage told throughout Southern India: Pārvatī came to this spot from Kāśī (Benares) in order to perform *tapas*; as a result of her penance here, she was granted the right to enter Śiva's body as the left half (of the androgyne, Ardhanārīśvara) (22). The goddess is worshipped in her form *prior to* the androgynous marriage: Paccaimalaiyammaṉ stands alone at the centre of the shrine, while in front of her are situated three divine attendants — Kaṅkaiyammaṉ (Gaṅgā), Paccaiyammaṉ, and Taṉiyammaṉ, all with *nāga* hoods. Thus while the idea of the divine marriage is essential to the *myth* of this shrine, the goddess has no true consort here but rather appears, as in other Tamil shrines (23), as the lonely, powerful Virgin longing for union with her lord. The cult is focused on her person and her power, which, as we shall see, the worshipper seeks to maintain and in some sense also to utilize. The fullness of this power and its potentially violent uses may also be reflected in the image of the divine marriage for which the goddess is said to be preparing.

Why is this marriage described here, as in so many shrines, as androgynous? The androgyne serves a number of symbolic roles in Tamil mythology. It is, to begin with, a natural symbol of wholeness and autonomy; as the androgynous creator, Śiva-Ardhanārī holds the power of the mother in inseparable union and is thus capable of producing the created universe. The androgyne is also a symbol of exchange, of the transfer of power and identities which takes place in the paradigmatic sacred marriage: the male offers his strength to the woman and is thus left temporarily castrated while she acquires a new, masculine power — which she will then use to give birth to their child, or to the husband reborn from her womb. Power must in this case be kept alive through a never-ending series of transfers between two parties, exactly as in the agonistic exchanges of the ancient sacrificial system (24); the interprenetration of sexual identities which must take place between the partners to this sacrificial marriage is symbolized by the bisexual icon. Closely allied to this notion is the image of the divine bride as in herself a tense amalgam of violent and pacific characteristics; marriage to the goddess is for the male a dangerous and yet enticing confrontation in which he barters his old existence for a newer and more secure rebirth. For the androgyne appears clearly in some cases to be a transformation of an ancient Tamil deity — the terrifying, single-breasted goddess who murders her lover (25). The single-breasted androgyne has absorbed in an iconic union and thus rendered accessible the menacing aspect of the virgin bride.

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(22) Related to the author by the temple priests on 29.12.1975.

(23) E.g. *Māṅkāṭu*, where the seductive Kāmākṣī performs *tapas* for Siva; perhaps the most famous example of this theme in the Tamil region is the shrine of Kaṉṉiyākumari.

(24) See J.C. Heesterman, « Brahmin, Ritual and Renouncer », *Wiener Zeitschrift zur Kunde des Süd- und Ostasiens*, 8, 1964, pp. 1-31.

The protagonist of this encounter, the mythic consort Śiva, does have a shrine of his own to the left of the Paccaimalaiyammaṉ shrine within the sacred compound (see fig. 2). Here Śiva is known as Maṉṉātīcuvarar (Śiva as king); inside there is an image of the god, with Piḷḷaiyār (Gaṇeśa) on his right and Naṭarāja on his left, while behind him one finds a painting of the folk deity Maturaivīraṉ with a single bride. But Śiva's role here is clearly secondary; as we have stressed, the cult centres on the virgin goddess who reigns alone, without any consort, in the main shrine. More important, perhaps, and certainly more striking are the large icons of other male figures placed at points around the compound and unsheltered by any roof. First, directly facing Paccaimalaiyammaṉ, there is the sage Gautama with his long ascetic's hair flowing down to the ground (see fig. 3). To his left, in a line with the Śiva-Maṉṉātīcuvarar shrine, sit a group of six sages, whose names are given in a modern inscription below them as follows (from left to right, see fig. 4): Parācar-Jaṭāmuṉi, Viyākkiramar-Lāṭamuṉi, Viyāsar-Muttumuṉi, Nāratar-Vetamuṉi, Vicuvāmittirar-Karimuṉi, and Vaciṣṭar-Cĕmmuṉi. The double title given to each figure suggests the existence of a layer of folk traditions about these sages, all of whom with the exception of the second (Viyākkiramar) are well known from Sanskrit sources: they are, in the same order, Parāśara, Vyāghra- (?), Vyāsa, Nārada, Viśvāmitra, and Vasiṣṭha. One should note the association of Viśvāmitra with the colour black (Karimuṉi) and of his ancient rival Vasiṣṭha with red (Cĕmmuṉi). To the left of this group and quite apart from them sits the imposing figure of Muṉīcuvaraṉ/Vāḻumuṉi (Skt. Munīśvara — see fig. 5).

The goddess at Tirumullaivāyil is thus associated with nine males, of whom three — Gautama, Munīśvara, and Śiva — are kept separate from the rest. How are we to understand this arrangement? Śiva, the frustrated bridegroom, has nothing to do with the eight terracotta sages and may be safely excluded from our discussion of their symbolism; the sages clearly constitute an independent set in relation to the goddess. The series of seven sages is, of course, a very well-known grouping of mythic figures associated in the Vedic and Brāhmaṇa literature with the constellation Ursa Major and with the Pleiades (the Kṛttikās) (26). The Kṛttikās are the wives of the Seven Sages and figure as such in their major myth, that of Skanda's birth from the seed of Śiva (27): the seed is prematurely extracted from the womb of Pārvatī, carried by Agni to the Ganges, and deposited by the Ganges in a thicket of reeds (*śaravaṇa*) whence it enters the bodies of six of the seven Kṛttikās. Skanda's consequent birth in six pieces, or his nursing at the breasts of the six Kṛttikās, explains his usual six-headed form (28). But what of the seventh Kṛttikā? As in the myths told about the Pleiades in other traditions (29), the Indian variant ascribes an anomalous role to the last Kṛttikā, no doubt because of the faintness of the seventh star in this group: Arundhatī, the wife of Vasiṣṭha, is preserved by her complete chastity and total devotion to her husband from being implicated in the birth of Śiva's child (30). This anomalous, contrasting nature of the seventh goddess is almost invariably preserved in the folk myths and icons related to this series. These include the village cults of the Seven Mothers (*saptamātṛkās*) or their allotropes, the Seven Sisters or the Seven Virgins (*kaṉṉimār*) (31). In many shrines to these goddesses, we find Durgā or Māriyammaṉ associated with a series of six or seven female deities; Durgā, the anomalous "extra" figure, either epitomizes and exaggerates a characteristic shared by them all (e.g. chastity, virginity) or, more often, opposes the rest in some crucial manner — for example, she may be violent, vindictive, and powerful, while the other goddesses will be indulgent and benign (32). But at Tirumullaivāyil this pattern has been transferred from the seven goddesses to their seven mythic husbands, while Devī appears in a single embodiment as the central deity of the shrine. This reversal is known from other village shrines in which a single goddess (often Kaṉṉiyammaṉ, the Maiden) is connected with seven brothers, of whom the youngest is dominant (33). Note that at Tirumullaivāyil the pattern of grouping six figures together survives while the anomalous seventh appears to have been duplicated, giving us Gautama, who stands apart from his fellows at the entrance to the main shrine, and Munīśvara, the giant figure situated alone to the left of the main group of sages.

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(25) I have argued this point at some length in my book, *Tamil Temple Myths: Sacrifice and Divine Marriage in the South Indian Śaiva Tradition,* Princeton, 1980.

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(26) See W.D. O'Flaherty, *Asceticism and Eroticism in the Mythology of Śiva*, London, 1973, pp. 93-103; A. Hiltebeitel, « Nahuṣa in the Skies: A Human King of Heaven », *History of Religions*, 16, 1977, pp. 339-50; *Śatapathabrāhmaṇa*, Bibliotheca Indica, Calcutta, 1903-1910, 2.1.2.4. There is significant variation in the names of the Seven Sages: see the resumé by J. Dowson, *A Classical Dictionary of Hindu Mythology and Religion, Geography, History, and Literature*, 11th ed., London, 1968, p. 268. The names given to these sages at Tirumullaivāyil do not correspond to the classical lists, but the importance of the number seven for the grouping of sages persists.

(27) In the early account of *Mahābhārata* 3.213-214, Skanda is born from the seed of Agni: see the analysis in O'Flaherty, *op. cit.*, pp. 94-96.

(28) *Matsyapurāṇa*, Ānandāśrama Sanskrit Series no. 54, Poona, 1909, 146 and 158; *Padmapurāṇa*, Ānandāśrama Sanskrit Series no. 131, Poona, 1894, 5.40-41; *Skandapurāṇa*, Calcutta, 1959, 1.1.20-27; *Kantapurāṇam* of Kacciyappacivācāriyar, Madras, 1907, 1.11 and 1.13.

(29) E.g. R. Graves, *The Greek Myths*, Harmondsworth, 1973, I, p. 152; A. Jellinek (ed.), *Bet ha-Midrasch*, 3rd ed., Jerusalem, 1967, IV, pp. 127-8.

(30) This pattern is sometimes totally reversed, so that Skanda is said to have been adopted by a single Kṛttikā: see *Kālikāpurāṇa*, Bombay, 1891, 48.12-96. In *MBh*, ed. V.S. Sukthankar *et al.*, Poona, 1933-1959, 1.188.14, the Seven Sages are said to have loved a single woman. In the classical system, Arundhatī is a faint star beside the Vasiṣṭha star in Ursa Major. According to *MBh* 1.224.27-9, Arundhatī became a star which is barely visible and not very beautiful because she distrusted her husband Vasiṣṭha.

(31) On the *kaṉṉimār* see B.E.F. Beck, « The Kin Nucleus in Tamil Folklore », in T.R. Trautmann (ed.), *Kinship and History in South Asia*, Ann Arbor, 1974, p. 8; Oppert, *op. cit.*, p. 484; H. Whitehead, *The Village Gods of South India*, 2nd ed., Calcutta, 1921, pp. 24, 29, 32, 40. On the *saptamātṛkās*, see *Matsyapurāṇa* 179.2-90; *Varāhapurāṇa*, Bibliotheca Indica, Calcutta, 1893, 27.1-39.

This arrangement can, I believe, be understood in part in terms of another concept drawn from the ideology of sacrifice — that of the *vāstu*-portion, the "remainder". The remnant of the sacrifice — the portion appropriated by Rudra, the sacrificial butcher — is, inevitably, the germ of the new birth produced by the sacrifice; all the other portions are consumed, and only the impure remainder can serve as the source of a new creation. As generally in Hinduism, fertility is firmly linked in the sacrificial cult to impurity (the rejected leavings) and specifically to death. The remainder symbolically embraces the entirety of creation: left over from the previous, wholly sacrificed entity, the remnant is the sole source of a new life. It is for this reason that *Atharvaveda* 11.7 praises the remnant as the foundation of the universe. A variation on this theme occurs in *Brāhmaṇa* number-symbolism, where we often find the last term of a series conceived as equal to the totality of the series: for example, the thirteenth month is sometimes said to represent the entire year (34). The final element of a series thus in a sense *includes* all the other parts while remaining separate, left over, and in some way removed from them.

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(32) See Whitehead, *op. cit.*, p. 32. I have discussed this pattern at length in *The Mythology of the Tamil Śaiva Talapurānam*, Ph.D. dissertation, University of London, 1976, pp. 239-64. For a folk myth typical of the Durgā-Kannimār cycle, see *Pattiṉiyammaṉ varalāṟu carittiramum kummiyum* of A. Ki. Aṉantanārāyaṇacāmi Upāttiyāyar, Nākapaṭṭaṇam (sic), 1915. For a classical variant, see *Cilappatikāram* of Iḷaṅkovaṭikaḷ, Madras, 1927, 20.37-40: here Kaṇṇaki is a violent chaste goddess compared to Kālī and to the « youngest woman of the Seven » (*aṟuvarkk' iḷaiya naṅkai*).

(33) Whitehead, *loc. cit.*; G. Jouveau-Dubreuil, *Iconography of Southern India*, Paris, 1937; p. 116. Cf. the myths of Alli, the Amazon Queen of Maturai, who plots with seven carpenters to build a magic ladder to attack Duryodhana: *Eṇiyeṟṟam*, Madras, 1914, pp. 39-50.

(34) *Kauṣītakibrāhmaṇa*, Ānandāśrama Sanskrit Series no. 65, Poona, 1911, 19.2. See F.B.J. Kuiper, « The Three Strides of Viṣṇu », in E. Bender (ed.), *Indological Studies in Honor of W. Norman Brown*, New Haven, 1962, pp. 148-50; D.M. Knipe, « One Fire, Three Fires, Five Fires: Vedic Symbols in Transition », *History of Religions*, 12, 1972, pp. 28-41.

But there is a tension which develops here between this role of the remainder and the idea of the all-embracing *centre*: the remainder is the end, the last product, the waste which yet equals the whole; but the centre may equally claim to represent and yet stand apart from the totality of a series. The centre or navel (*nābhi*) integrates and inheres in the dispersed, disparate parts; the tensions of opposed forces are held in check at the central point of focus. Out of the centre unfold the antithetical powers of the created universe, the realms of *ásat* and *sát*, chaos and ordered form. The cosmogonic process must begin at the centre of the universe (35). The consequent tension between the concepts of the centre and the remainder seems to be expressed in Hindu mythology in the complex relations between Viṣṇu and Śiva (originally Rudra) as revealed to us by the *Brāhmaṇa* and Epic literature (36). Seen very broadly, Viṣṇu and Rudra may be said to symbolize the contrasting and yet closely related facets of the sacrifice as the source of life. Viṣṇu is intimately linked to the centre, including the central vertical axis passing through the sacrificial stake (the *yūpa*) and reaching heaven and the transcendent zone above. As the Tortoise (*kūrma*), he is the foundation upon which rests the churning-pole (Mount Mandara, the axis mundi) used by the two antagonistic parties of *devas* and *asuras* to churn the ocean of milk; he thus stands, in a sense, between the two camps, in the same way that Kṛṣṇa stands in an ambiguous, intermediate position relative to the Kauravas and the Pāṇḍavas in the Epic (37). As Trivikrama, Viṣṇu embodies the notion of a vertical ascent along the axis mundi. But, as F. B. J. Kuiper has shown (38), the central, intermediate position of the god also expresses his *transcendence* of the inherent binary structure of creation, the inevitable division in our thought into subject and object, and the mythological insistence on an agonistic framework of rivalry between gods and demons (which is itself undoubtedly correlated to the agonistic struggle for the sacrifice in Vedic ritual) (39). Both parties to the mythic contest are ultimately contained in the transcendent, indivisible wholeness of Viṣṇu. Of course, as the "middle-man" who is situated between the two camps just as the sacrifice is the central stake in the wars of the gods and the demons, Viṣṇu is also a kind of "remnant" — he has no firm place in either camp, he is "left over" in the scheme of dual classification. The remainder is, however, much more closely linked with Rudra, the terrifying butcher who, though excluded by the other gods, must appear at the last moment to slay the victim and to claim his unique share of the sacrifice, the *prāśitra*-portion — the impure first cut which alone has not been apportioned and which is thus truly the remnant of the sacrifice and hence, as we have seen, the germ of all future sacrifices (40). Looking at these patterns somewhat differently, we might say that if Viṣṇu represents the totality which both transcends and embraces the created, mutually dependent polarities of life and death, Rudra is most closely identified with the dynamic "negative" pole of death, impurity, and evil without which the world of forms and order can have no meaning or existence and into which the ordered cosmos must also periodically dissolve in order to be renewed — just as the sacrificial victim must be slaughtered in order for new life to emerge. Note that the realm of chaos and death is seemingly a step closer to the original unity which lies beyond the first fissure in the divine; the world of *sát* proceeds out of *ásat,* while the the primeval unity (of Viṣṇu) precedes these categories (41). Rudra thus stands, with the remainder, outside the region of defined and stable forms but may at the same time claim to impart to these forms their true vitality and power, which is drawn from the chaos from which the universe is born. Rudra is death as the necessary substratum of life, the divine murderer who waits just beyond the limit of our false security, and who offers the gruesome but ineluctable antecedents for fertility.

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(35) See D. Shulman, « Tamil Flood Myths », *Journal of Tamil Studies*, 14, 1978, pp. 10-31.

(36) Sectarian myths of a later period may preserve traces of the original pattern, as in the case of the Dakṣa-Śiva myths; but the general tendency of the sectarian theologies is to shatter the old polytheistic framework, so that the earlier system of multilateral relations between the gods breaks down. See Hiltebeitel, *op. cit.*, pp. 299-360. I am greatly indebted in what follows to Hiltebeitel's suggestive remarks.

(37) See Kuiper, « The Three Strides... » *cit.*, pp. 150-151.

(38) *Ibid.*; see also F.B.J. Kuiper, « The Basic Concept of Vedic Religion », *History of Religions*, 15, 1975, pp. 107-120.

(39) See Heesterman, *op. cit.*; D. Shulman, « The Cliché as Ritual and Instrument: Iconic Puns in Kampan's *Irāmāvatāram* », *Numen*, 25, 1978, pp. 135-55.

These contrasting symbols seem to have found a spontaneous, non-literary expression in the Paccaimalaiyammaṉ shrine in the two anomalous figures of Munīśvara and Gautama. Munīśvara, who sits apart from but in line with the series of six sages, is the totality which includes and yet transcends them all. His gigantic stature indicates his all-embracing nature; his name — Lord of ***munis*** — suggests his divinity, his link to the transcendent, while the association with the silence (***mauna***) of the sage may recall that primeval silence into which all opposites all dissolved (42). Yet he remains near the other sages; he is of them as well as above them, immanent as well as transcendent — like Viṣṇu the Pervader, who holds the worlds within himself and yet sends them forth imbued with his essence. A faint iconic link with Viṣṇu may also be seen in Munīśvara's stylized head-dress, so like the standard Vaiṣṇava "crowns" (43).

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(40) See my article cited in n. 13. On the significance of the remainder, see also S. Kramrisch, *The Hindu Temple*, Calcutta, 1946, I, pp. 44-45.

(41) This conception seems already fully crystallized in *Rgveda* X.129; see the discussion by Kuiper in the sources cited in n. 38.

(42) See H. Zimmer, *Philosophies of India*, Princeton, 1971, p. 451.

(43) For an analogous instance, see D. Shulman, « On the Prehistory of Tyāgarāja-Siva at Tiruvārūr », *Art and Archaeology Research Papers,* 13, 1978, pp. 55-58.

Gautama, on the other hand, stands wholly apart from the other figures. He is also more directly tied to the goddess than they — for Gautama stands preeminent in worship at the very entrance to her shrine. His back is turned to the other sages; he is completely absorbed in his offering — the small *liṅga* in his left hand, mirrored in a much larger *liṅga* at his feet, and perhaps symbolizing the ultimate gift by the male of his manhood to the goddess. Like Śiva in the underlying, ancient myths of sacrificial marriage, the male worshipper offers his entire life and power to the goddess in the hope that by this sacrifice he will be reborn directly from her womb. Gautama's gift is the gift of seed; he stands alone as the crucial "extra" element, the remnant which generates a new creation. The goddess, for her part, functions here as a symbol of the devouring and yet ultimately life-giving sacrificial fire; her womb is the womb of the earth, which fashions life from the never-ending sacrifices it absorbs. The chthonic associations of the goddess are very marked throughout the Tamil area; at Tirumullaivāyil they are intimated by her name (*paccai* = green), for green is the colour of the vegetation born from the earth (44). As further confirmation of the symbolic links here between woman, marriage, and the earth, we have the "marriage" of two trees (margosa and pipal) at the edge of the sacred compound; the intertwining of the two trees — a common sight in South Indian cult sites — suggests the union for which the virgin goddess longs as well as its desired result, the fertility rooted in violence.

Gautama's role at Tirumullaivāyil as the anomalous, "extra" element closely tied to the goddess has an antecedent in an important series of myths about this sage. Gautama is said to have sustained the sages with food during a terrible drought; when at last the rains came and the sages wished to leave Gautama's *āśrama*, he begged them to stay a bit longer; they created an illusory (*māyāmayī*) cow which died at Gautama's touch, and the sages then accused him of the sin of slaying a cow and, using this as their excuse, abandoned him at once (45). Gautama's ability to feed the sages is connected in some versions to his achievement of bringing the Ganges down to earth; sometimes he does this in order to please Pārvatī, who is jealous of the Ganges' presence in the matted locks of her husband Śiva (46). Gautama is thus closely tied to two forms of the goddess

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(44) See Beck, « Colour and Heat », *cit.*, pp. 558 and 561; Shulman, « Murderous Bride », *cit.*, p. 145.

(45) *Kūrmapurāṇa*, Varanasi, 1972, 15.91-117; cf. *Varāhapurāṇa* 71.10-46; O'Flaherty, *Origins of Evil*, *cit.*, pp. 291-302. These myths about Gautama and the sages have a close multiform in another myth about the Seven Sages (including Gautama) and a drought: *MBh* 13.94-95. For another South Indian version (from Tiruvārūr/Hāṭakeśvara), see *Skandapurāṇa* 6.32.1-100.

(46) *Brahmapurāṇa*, Ānandāśrama Sanskrit Series no. 28, Poona, 1895, 74-75. Note that at Tirumullaivāyil Gautama is also associated with Gaṅgā (Kaṅkaiyammaṉ), who stands before the main goddess Paccaimalaiyammaṉ.

— Pārvatī and her rival Gaṅgā. The sacred river flows through his *āśrama* and makes it an island of fertility in the barren, drought-stricken land; similarly, at Tirumullaivāyil Gautama stands in the presence of the powerful, fertile goddess whose very name conjures up images of verdure and growth. Equally important for our purposes is the opposition set up by the myths between Gautama and the other sages: usually Gautama curses the deceitful sages to become evil heretics beyond the pale of the Vedas (47), while in the version of the *Śivapurāṇa* he is driven by the sages out of his own *āśrama*, together with his wife Ahalyā, because of the jealousy and greed of the sages' wives (48). In either case, Gautama is the anomalous, contrasting element; his exile from his own home in the *Śivapurāṇa* account echoes the exclusion of Rudra from the sacrificial rite and thus recalls at once the mythology of the remnant. The opposition between Gautama and the other (six) sages is faithfully reflected in the Tirumullaivāyil icons, which might almost be considered a depiction of this very myth. One may also wonder if Gautama's identity as the "true" Vedic Brahmin in contrast with his heretical colleagues has enhanced his popularity in a folk tradition which undoubtedly seeks its own symbols of Vedic legitimacy and orthodoxy.

A final element of symbolism, again characterized by Vedic resonances, remains to be discussed. Situated opposite the six sages at Tirumullaivāyil are their divine "vehicles" — three white terracotta horses. Two of the horses have human attendants fashioned by their side; the third, much more striking figure (and the nearest to the goddess shrine) is of a white, winged horse rearing up, with his front feet resting on the raised hoods of a five-headed serpent (see fig. 6). Behind the serpent sits another human figure. The association of the horse and the serpent is particularly interesting here. I have argued elsewhere that the serpent who is, as it were, reborn out of his own dead skin serves in India as a very widespread symbol of the sacrifice, in which new life is won from death (49). But the serpent seems to share this symbolic role with the horse, and the two animals are clearly associated from early times: if the *aśvamedha* sometimes appears as the archetypal image of the sacrifice (50), the idea of the "serpent-sacrifice" (*sarpayāga*) keeps cropping up in crucial contexts throughout the early literature, perhaps most noticeably in the frame-story of the *Mahābbārata* (the serpent-sacrifice of Janamejaya). Both horses and serpents rise from the ocean, and both are closely connected with the nether world, Varuṇa, and the sun (51). The Nāga-king Padmanābha takes the place of the horses which draw the chariot of the sun (52); during the destruction of the Triple City of the demons, the famous serpents Nahuṣa, Karkoṭaka and others become bands to bind the manes of Śiva's horses (53). Rāhu, undoubtedly a serpentine figure, rides a chariot of eight horses; he is portrayed with a snake's head, carrying a fish, standing beside his horse (54). Hayagrīva, the horse-headed form of Viṣṇu, sometimes holds a serpent; according to some texts, his left foot should rest on the cosmic serpent Ādiśeṣa (55); snakes are entwined in his head-dress (56). Ādiśeṣa lies on Mount Jātarūpa, near the dwelling-place of the submarine mare (57). Even family connections may suggest the association of horse and serpent: the horse-headed sage Dadhīca (Dadhyañc) is usually described as the son of the ophidian sage Cyavana, who slips out of his aged body as the serpent sloughs off his skin (58). But perhaps the most striking example of the link between horses and snakes is the Epic myth in which Kadrū and Vinatā wager on the colour of the divine horse Uccaiḥśravas; the serpent sons of Kadrū become black hairs in the tail of the white stallion (59). Indra's white horse Uccaiḥśravas, born from the sea of milk, is a possible precursor of the Tirumullaivāyil images. Still closer to the Tamil folk icons are the descriptions of the Vedic winged horse Dadhikrā and of his multiform, Paidva, the white horse trampling serpents (60).

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(47) See *Kūrmapurāṇa*, *loc. cit.* Here the evil sages are described as *uccbiṣṭa*, 'left over', 'rejected' (v. 105); *uccbiṣṭa* is a common term for the remnant or remainder.

(48) *Śivapurāṇa*, Bombay, 1953, 4.24-27. One should note that Ahalyā — elsewhere Indra's partner in adultery — is here the prototype of the virtuous wife (a role usually given to Arundhatī).

(49) See the article cited in n. 13.

(50) As in *Bṛbadāraṇyaka-Upanisad* 1.1.

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(51) See F.B.J. Kuiper, « The Bliss of Aša », *Indo-Iranian Journal*, 8, 1964, pp. 106-8; G. Johnson, « Varuṇa and Dhṛtarāṣṭra », *Indo-Iranian Journal*, 9, 1966, pp. 255-61; *Śatapathabrāhmaṇa* 3.1.1.7.

(52) J.Ph. Vogel, *Indian Serpent Lore*, London, 1926, pp. 84-7. Cf. *Viṣṇupurāṇa*, Bombay, 1866, 2.10.

(53) *MBh*, Southern Recension, ed. P.P.S. Sastri, Madras, 1931-1933, 8.26.16.

(54) On Rāhu, see T.A. Gopinatha Rao, *Elements of Hindu Iconography*, Madras, 1914, I, 2, pp. 321-23 and pl. XCVI. Rāhu is portrayed as described above in a 13th-century manuscript from Andhra reproduced in *Verve* (Homage à Tériade exhibition, London, 1975).

(55) T.V. Mahalingam, « Hayagrīva — the Concept and the Cult », *Adyar Library Bulletin*, 29, 1965, pp. 188-99.

(56) F.D.K. Bosch, « The God with the Horse's Head », in *Selected Studies in Indonesian Archaeology*, The Hague, 1961, p. 147.

(57) E.W. Hopkins, *Hepic Mythology*, Strasbourg, 1915, p. 23.

(58) *Śivapurāṇa* 3.24.2; *Liṅgapurāṇa*, Bombay, 1906, 1.35.7-9. *Tāṇḍyamahābrāhmaṇa*, Bibliotheca Indica, Calcutta, 1869-1874, 14.6.10, makes Dadhyañc the *father* of Cyavana. On Cyavana, see my remarks in « The Serpent and the Sacrifice », *cit.*; the relations between Cyavana and Dadhyañc deserve a separate study.

(59) *MBh* 1.18-20.

(60) See A.A. Macdonell, *Vedic Mythology*, repr. Delhi, 1971, pp. 148-49; Vogel, *op. cit.*, p. 11. Dadhikrā's name, like that of Dadhyañc, may be connected to *dadhi*, 'curdled milk': see F.B.J. Kuiper, « The Three Sanskrit Roots *Añc- /An/* », *Vak*, 2, 1952, p. 63. There is also a serpent named Dadhimukha (*MBh* 1.31); the association of serpents and milk is well known.

It is almost as if the Tamil village shrine were offering us a graphic representation of this almost forgotten Vedic symbol.

This correspondence between the Tirumullaivāyil icons and the archaic Vedic theme might seem an outstanding illustration of the generally conservative nature of village cults in India; however, we can hardly posit an unbroken cultural continuity in this case. Nevertheless, the evidence of myth and icon considered above points to a close tie between the folk tradition and Brahminical sources. The Tamil village shrine is by no means isolated from the mainstream of Sanskrit culture; rather, its chosen symbols seem consistently to reflect the essential concepts of the ancient Brahminical sacrificial system. In both the folk and the Brahminical shrines, this inheritance of sacrificial concepts is largely veiled; in the folk shrine it simply provides the background to the more general symbolism of marriage and rebirth and to the ordering of the various male companions of the goddess, while the Brahminical tradition has masked the theme of sacrifice in the myth of the wounded *liṅga* in the field of jasmine. In the latter case one senses a conscious attempt to go beyond the sacrifice to a more purified and stable image of the deity. Yet at Tirumullaivāyil, as in the traditions of other South Indian Brahminical temples, the inherent force of the symbols survives the attempt to superimpose a more recent ideology of divine purity and freedom from death; the violent attack upon the deity cannot simply be explained away. Both Śiva in the Mācilāmaṇi shrine and the green earth-goddess Paccaimalaiyammaṉ are linked, each in his own manner, to the pervasive, classical notion of the creative sacrifice.

Planets and Pseudoplanets in Indian Literature and Art with Special Reference to Nepal

by ADALBERT GAIL

1. *Rāhu and Ketu as Planets*

Whereas the twenty-seven or twenty-eight fixed star groups known as Nakṣatra, or single stars, already play an important part in Vedic scripture (1), it is not even clear if the planets, in contrast to the fixed stars, were observed as such (2).

In the Veda, a demon named Svarbhānu is made responsible for the eclipse of the sun (3).

In the epics, *graha* is primarily a terminus technicus for a circle of five planets which oppress the sun (*Mahābhārata* VI 96,55) or the moon (*MBh* VI 96,36) at the twilight of the worlds (*yugakṣaye*). These five are to be understood as being Mercury (Budha, Candrasuta), Venus (Uśanas, Śukra, Bhārghava), Mars (Maṅgala, Aṅgāraka, Bhauma), Jupiter (Bṛhaspati, Devapurohita) and Saturn (Śani, Śanaiścara), which, like the sun and the moon, each at its own distance, and each with its own period of revolution, revolve around the world mountain Meru (axis mundi) (4).

An expansion of this pentad of planets to nine is indeed indicated in the *MBh*, but is not yet clearly developed. A perception of the sun and moon as planets seems to be indicated by passages where they are called Masters of the Planets (XII 118,15; 162,24. XIII 66,12; App. I no. 6; XIV 43,6). When speaking twice of seven planets on the one hand, and of the moon on the other (VI 2; VII 112,22), the narrator has a further planet in mind: Rāhu/Svarbhā-

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(*) The photographs illustrating this article are by the author.

(1) W. Kirfel, *Die Kosmographie der Inder*, Bonn-Leipzig, 1920, repr. Darmstadt, 1967, p. 34.

(2) Kirfel, *op. cit.*, p. 33; R. Billard, *L'Astronomie Indienne*, (Publications de l'Ecole Française d'Extrême-Orient, LXXXIII), Paris, 197, p. 16.

(3) Kirfel, *op. cit.*, p. 29.

(4) Kirfel, *op. cit.*, pp. 128 ff.

nu (5), which, as a heavenly body, is larger than the sun and moon and revolves in its orbit beneath both of them (6). The group of the five planets, expanded through the inclusion of the sun and moon, as well as Rāhu, is detected in *MBh* V 187,31 *adrākṣaṃ dīpyamānān vai grahān aṣṭāv iveditān.* The ninth and last planet appearing in the Purāṇas is the comet god Ketu, who is not yet explicit in the *MBh* (7). He will be spoken of later. Rāhu's activities are mythologically founded upon the narrative of the churning of the Ocean of Milk. *MBh* I 17,4-8 reports that the demon Rāhu had drunk nectar, which was reserved for the gods; he was discovered by the sun and the moon and thus punished by Viṣṇu through decapitation. Out of this results the eternal hostility of Rāhu's head (which had been made eternal by the drinking of the nectar) towards the sun and the moon, which also, even today (at eclipses of the sun and the moon), devours them. In numerous versions and variants, which do not touch the essence, this myth wandered through the puranic literature (8). The astronomers Āryabhaṭa and Varāhamihira eliminate such pre-scientific conceptions about the eclipses. Both know precisely the causes of eclipses. Āryabhaṭa no longer uses the name Rāhu, but rather names the nodes, i.e. the points of intersection of the moon's orbit and the ecliptic, *pāta* (9). Varāhamihira says clearly in his *Bṛhatsaṃhitā* that at the eclipse of the moon, the moon wanders into the earth's shadow, at eclipses of the sun, the moon enters the sun (*BṛS*, 5,8a). The assumption of the existence of Rāhu is, for him, baseless and only to be used figuratively (5,13,15).

In the introductory verses of his Rāhu report, Varāhamihira actually concerns himself with various contemporary conceptions of Rāhu, which are interesting for our further examination. Some say that Rāhu is a demon's head which, albeit severed from the trunk, by virtue of the imbibing of nectar has continued alive and has become a planet. He would be round like the sun and the moon, be dark and only visible in the period of the nodes (*parvakāla*; i.e. when the moon's orbit and ecliptic intersect during conjunction or opposition) (1-2). Varāhamihira apparently reverts back to epic-puranic cosmography and the *Amṛtamanthana*-myth with the Rāhu episode. Others, he proceeds, explain that Rāhu would have the shape of a serpent, which is split in the head and the tail (*mukha-puccha-vibhaktāṅga* 3a); while some others maintain that he is bodiless, pure darkness (*tamomaya* 3b). The latter of these two conceptions is also expressed in *Viṣṇudharmottarapurāṇa* (*Vdh*) I 43,41-43. Viṣṇu says to Rāhu: « In the period of the nodes (*parvakāle ca samprāpte*) you will cover the sun and moon. Dark-of-form and invisible, you will walk backwards [*viparītam*; i.e. against the normal movement of the planets]. Having entered into the shadow of the earth (you will) cover the moon; having entered the moon, you will cover the sun ». This interpretation of Rāhu as pure darkness is scientifically not only not to be challenged; it is exactly as correct as Varāhamihira's explanation, if one assumes that Rāhu is used as a metaphor for the shadow effect of the earth at the eclipse of the moon and for the shadow effect of the moon at the eclipse of the sun (10). Varāhamihira makes no further comments to the Rāhu-tamas theory. He rejects the conception that Rāhu is the head and tail of a *nāga* (4-6). What sort of conception is that? Who are those *anye*, who hold this view? In Indian literature this conception is only to be found in the *BṛS*.

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(5) The optional use of both names already in the *Mahābhārata* (*MBh*) VI 13: v. 39, Svarbhānu, v. 45 Rāhu. Similar is the situation in the Purāṇas, cf. e.g. *Matsya Purāṇa* (*MtP*) 126, 1 and 9.

(6) *MBh* VI 13, 40 ff. Svarbhānu/Rāhu has a diameter of 12,000 yojanas, the moon of 11,000 yojanas, the sun of 10,000 yojanas.

(7) Implicitly, Ketu is mentioned in *vasūnāṃ navamam manye grahāṇām daśamam tathā.* This verse occurs, according to *MBh* IV 2, 18 ed. crit., only in the MSS. K₂D (exc. D.6.6.9).

(8) *Viṣṇudharmottara-Purāna* (*VdhP*) I 42, 33-45; *MtP* 251, 12-16; *Bhāgavata-Purāna* (*BhP*) VIII 9, 24-26; *Agni-Purāṇa* 3, 14-16; *Skanda-Purāna* (ed. Veṅkaṭeśvar Press) I 1, 13, 29-31. In *amṛtamanthana* reports of other important Purāṇas such as *Viṣṇu-Purāṇa, Padma-Purāṇa, Vāyu-Purāna, Brahmāṇḍa-Purāṇa* the Rāhu motive is missing.

(9) Billard, *op. cit.*, p. 129.

Indigenous to the Near East is the idea that the eclipses of the sun and the moon are caused by the head and tail of an enormous dragon. Bouché-Leclerq notes in his work *L'Astrologie Grecque*: « Les Grecs du Bas-Empire et surtout les Arabes firent grand état des noeuds ecliptiques, appelés la Tête et la Queue du Dragon » (11). The discovery of the ascending and the descending node of the moon's orbit through the Hellenistic-Alexandrine astronomy in the 2nd century A.D. transforms the myth into science, while the head and tail of the dragon now become metaphors for the nodes. Known in the European Middle Ages as Caput and Cauda Draconis, they are still used today in modern astronomy (12). It can almost certainly be accepted that the Indians owe the correct explanation of the eclipses as well as other astronomical knowledge to the Alexandrines (not later than in the 5th century A.D.) (13). Varāhamihira humbly recognizes this achievement in the introduction of his *Bṛhatsaṃhitā*, when he says « the Occidentals, indeed, are foreigners (*mlecchā hi yavanās*) (14), but this science [astronomy] is truly at a peak with them » (2,15).

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(10) Also in the other respects the *Vdh* proved to be conversant with the contemporaneous scientific astronomy; *vide* A. Gail, *Paraśurāma, Brahmane und Krieger*, Wiesbaden, 1977, pp. 68 f., 98 ff.

(11) *L'Astrologie Grecque*, Paris, 1899, p. 122 (cited by W. Hartner, « The Pseudoplanetary Nodes of the Moon's Orbit in Hindu and Islamic Iconographies », in *Ars Islamica*, V, 1938, p. 132 n. 24).

(12) Hartner, *op. cit.*, p. 133; Billard, *op. cit.*, p. 129; J. Herrmann, *Atlas zur Astronomie*, Minden, 4th ed. 1977, p. 51.

(13) Billard, *op. cit.*, pp. 69 ff.

It appears as totally improbable that the Indians independently and by themselves had formed the concept of Rāhu as being « head and tail of a *nāga* », when one keeps in mind these two historical premises: the Near-Eastern origin of the myth of eclipses caused by the head and tail of a dragon, on one hand, and the influence on Indian astronomy coming from the west, on the other. More probable is that the idea was adopted, while the Near-Eastern dragon became the *nāga* familiar to the Indians. This assumption gains in plausibility, based on the observation that the Indian (that is, epic-puranic) Rāhu mythology knows absolutely nothing of the conception of Rāhu as being the head and tail of a serpent; this idea appears only in the *BṛS* 5,4-6 (see p. 135) for which the dependence on western conceptions is certain. At the instant, however, as the conception of head and tail of a dragon reached India (5th/6th centuries A.D.), it can no longer have been "believed myth", but rather was a metaphor for the nodes of the moon's orbit (2nd/3rd centuries A.D.). Varāhamihira's polemic against Rāhu as *mukha-puccha-vibhaktāṅgam bhujaṅgam* (*BṛS* 5,3a) is thus surprising, the more so as he himself continues, even after his own "de-mythicizing" of Rāhu, to speak metaphorically of the « presence of Rāhu » at the time of eclipses! (15).

The popular Sanskrit literature which follows Varāhamihira does not take up the conception of Rāhu as a serpent, whose head and tail should represent the nodes (*parvan*). Tradition on the contrary adheres firmly to ancient mythological conceptions by establishing, in the framework of the *amṛtamanthana* myth, Rāhu's head as a planet which darkens the sun and the moon. This conception remained indispensable as long as it was assumed, cosmographically, that the moon had a wider orbit than the sun (16).

Superstitions in India were then nearly always unassailable, when they were based upon the Veda. The astronomer Brahmagupta goes so far in his *Brahmasiddhānta* as to retain, against better knowledge, the conception of demon Rāhu as the cause of the eclipses, because otherwise Vedic holy scripture and Brahmanical ritual would be discredited (17). One is vividly reminded of the battle of the Roman Catholic church against Copernicus' revolution.

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(14) To an Indian the term *mleccha* qualified the speaker of an incomprehensible language as to a Greek the term βάρβαρος. « Le sanskrit *yavana*, moyen indien *yona*, est devenu un mot général pour désigner "l'occidental", tout comme a fait l'Europe avec l'oriental » (Billard, *op. cit.*, p. 70).

(15) *tasmin kāle sānnidhyam asya tenopacaryate Rāhuḥ*/*BṛS* 5, 15.

(16) W. Kirfel, *op. cit.*, p. 128.

(17) E.C. Sachau, *Alberuni's India*, London, 1910, II, pp. 110 f.; Billard, *op. cit.*, pp. 130 f.

Around 1030 A.D., the Arabian geographer and astronomer Alberuni authored an important book concerning India, in which he also directly describes and critically comments upon superstition and science of the Indians. In the section on comets one meets with a sentence out of context, « The head of the dragon is called *Rāhu*, the tail *Ketu* » (18). Further, it is said « The Hindus seldom speak of the tail, they only [!] use the head. In general all comets which appear in heaven are also called Ketu ». These remarks of Alberuni contain a difficulty. The most important source for Alberuni are the writings of Varāhamihira, whom he admired highly and amply quotes. He thus refers in the same work at an earlier passage (19) to Varāhamihira's remark concerning the head and tail of the snake-shaped Rāhu (*BṛS* 5,3). If Alberuni turns Varāhamihira's snake — which, according to our opinion already was the interpretatio indica of the Near-Eastern dragon — again into a dragon, then he follows his native-Arabian tradition. But from where does he take on the (Indian) notion that the tail is Ketu, about which little is said (!) and which in general means comet?

This remark by Alberuni leads us to the problem of Ketu as *graha* or planet. Almost all modern authors are of the opinion that Ketu is the descending node of the moon's orbit, or the body/tail of Rāhu (20). This conception is not confirmed, neither in the *Petersburger Wörterbuch* by Böthlink, nor in the texts used by Kirfel in his *Kosmographie* and in the *Weltgebäude* (21). Billard was the first, to my knowledge, to point out that such a conception is not at all proved for the Sanskrit literature of the 1st millenium A.D., but rather Alberuni's statement (see above) stands at the beginning, followed by the *Narapatijaya-caryāsvaroḍaya* (1175 A.D.) (22). Since Billard has not checked any mythological sources, it is necessary to complete Ketu's history also from this standpoint.

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(18) Sachau, *op. cit.*, II, p. 234.

(19) Sachau, *op. cit.*, II, p. 110.

(20) A.L. Basham, *The Wonder that was India*, repr. London, 1967, p. 493: « Rāhu and Ketu, the ascending and descending nodes of the moon »; Hartner, *op. cit.*, p. 131: « ...Rāhu's head as well as his body, Ketu... »; W. Kirfel, *Symbolik des Hinduismus und des Jinismus*, Stuttgart, 1959, p. 63: « Ketu, der Planet des absteigenden Knotens der Mondbahn, ... »; D. Mitra, « A Study of some Graha-images of India and their Possible Bearing on the Nava-devās of Cambodia », *Journal of the Asiatic Society*, VII, nos. 1, 2, 1965, p. 17 n. 1: « ...Rāhu out of the lower portion of whom Ketu originated according to the Mythology »; V. Moeller, *Symbolik des Hinduismus und des Jinismus*. Tafelband, Stuttgart, 1974, p. 128: « ...Rāhu und Ketu, die beiden Knoten der Mondbahn, ... »; P. Pal, *The Astral Divinities of Nepal*, Varanasi, 1969, p. 34: « ...Rāhu and Ketu, who stand for the ascending and descending nodes of the moon, ... »; T.A. Gopinatha Rao, *Elements of Hindu Iconography*, repr. Delhi, 1971, vol. I pt. II, p. 323: « (Ketu) the lower portion of the body of Rāhu », p. 318: « ...the ascending and descending nodes of the moon, called Rāhu and Ketu, ... ».

(21) PW s.v. *graha*; Kirfel, *op. cit.*, p. 128 n. 141; W. Kirfel, *Das Purāṇa vom Weltgebäude*, Bonn, 1954, s.v. *Ketu*.

(22) Billard, *op. cit.*, pp. 125-127.

Ketu already means ‘sign’, ‘light beacon’, ‘light-ray’ in the Vedic literature. From there it developed in the epic-puranic literature on the one hand, the significance ‘signal’, ‘banner’, ‘standard’, and on the other the meaning ‘unusual appearance of light’, i.e. comet (23). In puranic cosmography the mass of single comets (*ketavaḥ*) is reduced to the quintessence of comets, i.e. a demon with the name Ketu, and this Ketu appears next to Rāhu, the demon/planet causing the eclipse of the sun and moon, as the ninth and last planet. In several puranic parallel texts dealing with cosmography, this interpretation is unanimously developed, while Ketu is shown as being dark-coloured and drawn by a carriage with eight horses (24). In the *MBh*, this significant conception has not yet been proved, a character with the name Ketu is missing in the critical text.

The oldest evidence, next to the puranic testimony, concerning Ketu is the *Yājñavalkyasmṛti* 1.296 (25), where Ketu is named as one of the nine *grahas* worthy of honour, and *Amarakośa* III 3,60.

Indeed, Varāhaminira does not name Ketu expressis verbis *graba* — this would contradict his astronomical enlightenment, accepting Rāhu only as a metaphor for the nodes of the moon's orbit. But the order of his material which attributes one chapter to each planet beginning with the sun (chap. 2) via Rāhu (chap. 5) to Śanaiścara (chap. 10) ending with Ketu (chap. 11), clearly shows that he was influenced by communis opinio. He expressly states that some assume many Ketus, while others hold for a single Ketu in various forms (11,5).

The first detailed treatment of Ketu after Varāhamihira is given in *Vdh* I, 106, where the origin and activity of the *grahas* are examined. After Rāhu (92-95a), the author concerns himself with Ketu (95b-107), whose origin is to be traced back to a boon by Brahmā to his daughter [!] Mṛtyu (Death). Ketu springs forth out of her sigh as a black serpent (*kṛṣṇa-sarpa-samākāra* 104) with a flaming crest equal to the fire of the dissolution of the world (*kālānalasamaprabha* 105). He receives the name Dhūmaketu (‘he who has smoke as his sign’ = fire) which augurs fortune (*śubha*) and misfortune (*aśubha*) in various forms for the creature.

Thus we detect that until the 7th century A.D. (*Vdh*) (26) Ketu was exclusively considered the representative of the comets and actually had nothing to do with Rāhu. Nothing changes in this respect in the ensuing period. *BhP* VI 6,39, as well as *MtP* 93,7 use the plural *ketuśatam/ketavaḥ*, indicating the multitude of comets.

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(23) Billard, *loc. cit.*; PW s.v. *Ketu*.

(24) Kirfel, *Das Purāṇa vom Weltgebäude* (*Bhuvanavinyāsa*), *cit.*, pp. 75.23, 259.4.

(25) Mitra Miśra commenting on *Yājñavalkyasmṛti* 1, 296 remarks that the singular Ketu denotes an abstraction from numerous Ketus: *Ketur ity ekavacanaṃ gaṇābbiprāyeṇa Ketūnām bahutvāt*.

(26) On the dating of the *Vdb* see Gail, *Paraśurāma, Brahmane und Krieger*, *cit.*, pp. 98 ff.

Alberuni, in contrast, says concisely that Ketu would be the tail of the dragon, whose head would be Rāhu, and further « in general, all comets which appear on heaven are also called Ketu » (27).

We are now at a very decisive point: is the interpretation acceptable that Ketu is, on the one hand, the tail of the dragon, being the descending node of the lunar orbit, on the other the essence of the comets? Alberuni deviates here from his source, Varāhamihira's *BṛS*, which he amply quotes, in an important point. With Varāhamihira, Ketu is exclusively a comet, while Rāhu represents the head *and* tail of the dragon (= *nāga*), ascending and descending node.

Hypothetically I would like to assume the following development for the period between Varāhamihira (6th century) and Alberuni (11th century). The first depiction of the comet Ketu, with « snake-shaped abdomen » (indicating the snake-like comets) certainly falls into this period (28). But these serpent-features could per similitudinem also be interpreted as a dragon's tail. The *nāga*-like Ketu must have seemed to be like the tail of a dragon, especially to Alberuni, to whom the dragon conception was familiar from Persia. Whether he really was the first to make the *nāga*-tailed Ketu the descending node must remain an open question. Here the point in question was only to show that this interpretation in India finds support neither in the scientific nor in the mythological literature of the 1st millenium A.D. (29).

What is probably the oldest evidence of Indian representation of planets comes from the Sarnath school: it is the right half of a door lintel, upon which the planets Bṛhaspati, Śukra, Śani and Rāhu are to be seen (30). Ketu has not been lost somehow, but rather had never been shown. All reliefs of the eastern school of Bihar and Bengal show nine planets. Ketu is mostly shown as being a *nāga* or *nāgī* with the upper part of a human body and the abdomen of a serpent, in addition to the cobra-hood (*phaṇa*) known from Balarāma and Pārśvanātha. In Orissa, the *aṣṭagraha* concept was maintained for quite a long time, exactly up to the end of the Bhauma dynasty, i.e. the end of the 10th century. The serpent-tailed Ketu was adopted into the *grahas* of the door-lintel then for the first time.

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(27) Sachau, *op. cit.*, II, p. 234.

(28) See below.

(29) M.-Th. de Mallmann, *Les Enseignements Iconographiques de l'Agni-Purāṇa*, Paris, 1963, pp. 81 ff.

(30) Photo in Mitra, « A Study of some Graha-images of India and their Possible Bearing on the Nava-Devās of Cambodia », *cit.*, pl. I.

A survey conceived on a large scale by O. Viennot for Central and West India reveals that the *navagrahas* appear on the door lintel as a decorative element for the first time in the 4th period (out of a total of 7), which was the 8th century. An antecedent form as *aṣṭagrahas* is not substantiated here (21).

The worship of the *navagrahas* in Southern India is attested to only from the 11th century on. The planet gods are first represented here, mostly in the round on pedestals, in niches or even in their own small temples (22). The assimilation of Ketu into the group of planet gods, which took place partially with extensive delays, certainly was caused by the fact that the conception of a comet god as a planet found only hesitating acceptance. Planets had a certain size (as also Rāhu had in the epics and Purāṇas); one could calculate their orbits, but the coincidental appearance of comets from time to time played no part in mathematical astronomy (*na gaṇita-vidhināsya śakyate jñātum, BṛS* XI 2).

The eight proven planets with Rāhu were seen, on the other hand, also in the sense of *dikpālas*, i.e. guardians of the eight directions. The *Amarakośa* I 3 (*digvarga*), 3 enumerates the planets of the cardinal points (*diśāṃ grahāḥ*) beginning in the east in the following order: Ravi (Sun), Śukra (Venus), Mahīsūnu (Mars), Svarbhānu (Rāhu) Bhānuja (Saturn), Vidhu (Moon), Budha (Mercury) and Bṛhaspati (Jupiter). Within its list of 101 various temple types the *Vdh* sketches a temple called *Kamala* (Lotus), which stands upon an octagonal terrace and should have eight sanctuaries with eight doors pointing towards the corresponding cardinal directions. The eight protectors of the world or eight *grahas* without Ketu should be represented in them (*aṣṭāv tatra tu kartavyā grahāḥ Ketu-vivarjitāḥ* III, 86,52b). We do not know if such a temple ever existed in India, or if it is a product of speculation (23). We will bear in mind, however, that we are dealing with a central temple with eight planet gods pointing towards the cardinal points, from which Ketu is excluded. In two essential items, we shall meet with the structure sketched out here on two Nepalese temples.

2. *The* Aṣṭagrahas *as Temple Decor on Two Nepalese Temples*

The 17th century appears to have been artistically the most prolific in Nepal's history. More than 90% of the royal palaces and temples belong to this period; those monuments from earlier times were restored and renovated in the

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(21) O. Viennot, *Temples de l'Inde Centrale et Occidentale*, Paris, 1976, pp. 134, 216 f.

(22) The oldest *navagraha* testimony known to me in South India is a slab in the maṇḍapa of the Bṛhadīśvara-Temple at Gaṅgakondacoḷapuram built under Rājendra I (1012-1044). Cf. C. Sivaramamurti, *The Chola Temples*, New Delhi, 1973, p. 27, pl. X.

(23) S. Kramrisch, *The Hindu Temple*, repr. Delhi, 1976, vol. II, pp. 411 ff.

17th century (34). It was not, as one would assume, the concentration of a single sovereign power over the Kathmandu valley, which is small at all events, that conditioned these creative achievements, but rather the existence of the three rival petty kingdoms of the Malla princes who resided in Kathmandu, Patan and Bhaktapur.

Not less than the worldly rulers' zeal to patronize, we must see the religious forces of Buddhism and Hinduism, which were complementarily fruitful and inspiring, and which favoured the vigorous construction of temples on the side of Hinduism and the active construction of monasteries on the side of Buddhism.

One of the most beautiful and best maintained constructed sites in the Kathmandu valley is the palace area in Patan, sister-city of Kathmandu, which lies south of the Bagmati river. This square consists of the façade of the palace in the east and various temples in the west. The Viśveśvara temple (also Viśvanātha), which is dedicated to the god Śiva as Lord of the World (fig. 2), is to be found on the northern end of this square. The founding charter, an inscribed stone with a 20-lined inscription of the year NS 747/1626 A.D. before the temple door, names Siddhinarasimhamalla (1620-1661 A.D.) as patron of the construction (35). Like all temples of the indigenous type ("pagoda form"), it is built out of wood and brick. The structure is two-storied and stands upon a two-storied stone terrace. The lower story consists of an outer and inner square. The outer square is an open gallery of wooden pillars (portico), which above the beams is continued by a brick wall and is covered by a tiled roof with an incline of approximately 45°. The inner square is a wood- and brick structure, which constitutes the sanctuary, and which forms a second story stretching up beyond the roofing of the outer square, and covered by a pyramidal roof, which likewise has a 45° incline (36).

The temple has its proper entrance in the west, where a stone figure of Nandi lies before the staircase. The temple also has a "representational side" facing towards Durbar Square in the east, where there is also a staircase which is flanked by two elephant riders (37). What set the Viśveśvara temple apart from the other temples in the palace area are the excellent figural wood carvings on the gallery, as well as in the area of the four doors with their wooden lintels, frames and struts, decorating the middle of the *garbhagṛha* walls.

Iconographically, this richly decorated complex still leaves unanswered some questions, which are not answerable with the *pratimālakṣaṇa*-texts of Hindu origin, available up to the present. I would like to restrict myself here to the identification and description of eight disc-shaped carvings which flank the four doors in pairs. The lintel above each of the four doors is extended on each side as a decorated beam. The space on each of the lintels proper is decorated with either three or five deities, in the extension follow then the medallions which are in question here, and finally slightly varied representations of *dvāragaṇas* (fig. 1). The identification of the medallions as representations of the *aṣṭagrahas* is supported by both Hindu and Buddhist texts. The Hindu testimonies have been published by M.-Th. de Mallmann and D. Mitra, the Buddhist ones by P. Pal (38). In the Kathmandu valley itself, the knowledge concerning the contents of these sculptures has apparently been lost. Two educated Brahmans who reside in Patan, one of whom has proved to be an excellent authority on Tantric iconography, could not identify any of the sculptures, with the exceptions of Sūrya and Candra.

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(34) D.R. Regmi, *Medieval Nepal*, pt. II, Calcutta, 1966, p. 943.

(35) Regmi, *op. cit.*, pt. II, p. 281.

(36) W. Korn, *The Traditional Architecture of the Kathmandu Valley*, Kathmandu, 1976, p. 71, Temple Type F 37.

(37) U. Wiesner, *Nepal*, Köln, 1976, p. 127; C. Pruscha, ed., *The Kathmandu Valley*, Vol. 2, Vienna, 1975, p. 165.

The three storied Hariśaṅkara temple, which borders the Durbar Square towards the south, was commissioned by Yogamatī, daughter of the important ruler Yoganarendramalla (1684-1705) in commemoration of her father (39). Since its decor essentially follows the model of the 80 years older Viśveśvara temple, I have placed the corresponding pictorial parallels side by side for the purpose of comparison.

All of the wooden reliefs which are to be examined have been mounted in a frame of *c.* 18 cm., which consists of a ring of many parts, of rosettes, tendrils and leaf-pattern, and below it is bordered by a sort of sill, which should suggest a war-chariot. Before the sill, draught-animals are represented en face, in three-quarter, or in full profile.

We will commence with the image on the right of the eastern door of the Viśveśvara temple, showing the moon-god, Candra, who represents here the directional planet of the northeast (fig. 3). The god is provided with cuirass and a crown. In both of his hands, the palms of which are turned forwards as in the offering of protection, he holds the ends of two lotus-stalks, which run into blossoms above his shoulders. Candra is flanked by two archers, who shoot arrows to both sides. The lower portion of the moon's body is covered by his charioteer, whose reins direct five geese (*haṃsa*) with outspread wings. Whereas Hindu iconography generally prescribes a team of ten horses (40), we know Buddhist texts with the goose as *vāhana*, and only the *Kriyāsaṃgrahapañjikā*, which is a Buddhist ritual handbook, written by Kuladatta around 1100, prescribes seven geese as draught-animals (*haṃsasapta*) (41). The parallel image on the Hariśaṅkara temple (fig. 4) is indeed more distinct, but also more roughly worked. From the geese, which turned out somewhat poorly and are more strongly weathered, there are no reins leading to the charioteer. The strong lunging (*ālīḍha* and *pratyālīḍha*) of the archers is especially emphasized, the frame of the image is kept more simple than its counterpart piece on the Viśveśvara temple).

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(38) De Mallmann, *op. cit.*, pp. 82-86; Mitra, *op. cit.*, pp. 31-36; P. Pal, *The Astral Divinities of Nepal*, Varanasi, 1969, pp. 60-74.

(39) Wiesner, *op. cit.*, p. 127; Korn, *loc. cit.*, see: three-storied temple on left side.

(40) Mitra, *op. cit.*, pp. 31-36.

The sun-god, on the left of the eastern door of the Viśveśvara temple, as well as his two acolytes, does not differ at all from Candra on the opposite side (fig. 5). Both lotus-blossoms are already known as emblems of the sun-god since the Gupta period. The charioteer's reins lead the five winged, rearing steeds. The pentad is extraordinary; normally, in India as in Nepal, the sun-god is drawn by seven horses (42). A large garland (*vanamālā*) reaching from the shoulders to the knees decorates Sūrya on the Hariśaṅkara temple, the charioteers wear large nimbus-like crowns (fig. 6). The species of draught-animals is now hardly recognizable, obviously here also the winged steeds are to be assumed, reins are missing as on the opposite side (Candra). Sūrya represents, as on all Indian temples, the direction of the rising sun.

Right from the southern door follows the planet Mars (Maṅgala), who represents the southeast (fig. 7). He appears, like sun and moon, with breastplates and crown; in contrast to them, however, he is four-armed with a short spear (? *śakti*) and *triśūla* in the upper hands, the lower left hand carries a club, the lower right shows the wish-yielding gesture. The war-chariot is drawn by seven rams, of which the middle one is shown en face, the others being shown in profile. Two flying club-bearers follow on each side of the rams; they are companions of the god, in addition to the two archers in the wagon itself. On account of the *vāhanas*, one could quite spontaneously consider the image, seen isolatedly, as Agni, the fire-god. This affinity has a deeper reason. On Indian temples, since the early medieval period, Agni with a ram represents the *dikpāla* of the southeastern direction. The assimilation of Mars into Agni's function — the planet now being the guardian deity of the southeast — must have become decisive for the choice of the ram as Mars' *vāhana*. Nothing remains of the dynamic power of the rearing animals on the parallel relief of the Hariśaṅkara temple (fig. 8). Only five lank rams pull the wagon. Both club-bearers are missing here, as is the umbrella-bearing acolyte. The *triśūla* here looks more like a *tridaṇḍa* (43).

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(41) Pal, *op. cit.*, pp. 32, 61 f.

(42) A. Gail, « Der indische Sonnenkult — Eigengewächs oder Import? » *ZDMG*, 128, pt. 2, 1978.

(43) Concerning the *tridaṇḍa* cf. M.-Th. de Mallmann, *Introduction à l'Iconographie du Tântrisme Bouddhique*, Paris, 1975, p. 22, pl. III, figs. 6-8.

Mercury (Budha) depicted to the left of the southern entrance, represents the south (fig. 9). He is, like Mars, four-handed; he carries above sword and shield, and below he carries the club and shows *varadamudrā*. The sword in the upper right boldly breaks through the frame of the medallion. The ends of a waist scarf flutter to the right and left. The five draught-animals of Mercury are indeed not unlike teddy bears, but should represent lions (according to iconographic texts) (44). They are flanked on either side by a flying sword-bearer. An umbrella-bearer approaches from the left, who, in the parallel image of the Hariśaṅkara temple, is missing as is the sword-bearer (fig. 10).

Jupiter (Bṛhaspati), right from the west door, represents the southwest (fig. 11). Corresponding to his historical character as guru of the gods, he wears no armour, but rather the sacrificial thread (*yajñopavīta*) on his uncovered chest. His priestly functions are symbolized by the rosary in the upper right hand and by the water-pot (*kamaṇḍalu*) in the lower left. The upper left hand holds a *tridaṇḍa* (45), the lower right fulfils wishes (*varada*). Charioteers and archers are shown as with the other planets. Seven excellently worked elephants draw Jupiter's vehicle, flanked by two sword-and-shield bearers. The five elephants on the Hariśaṅkara temple (fig. 12) have all been robbed of their trunks, whereby the mediocre execution of the theme is emphasized.

On the left side of the western door Śukra (Venus) is seen, protector of the west (evening star?) and guru of the *asuras* (fig. 13): like Bṛhaspati, with a rosary in the upper right hand, *tridaṇḍa* in the upper left, *kamaṇḍalu* in the lower left. The lower right hand is stretched out granting wishes.

Śukra wears breast-armour and a crown and is accompanied by two archers. The charioteer holds seven winged, rearing horses by reins, who are framed by two seated (*rājalīlāsana*) sword-bearing warriors. The last-named are missing in the representation on the Hariśaṅkara temple (fig. 14). Five frontally portrayed horses are deplorable in contrast to the carefully cut seven horses of the Viśveśvara temple.

Saturn (Śani), to the right of the north portal, is the representative of the northwest (fig. 15). Striking is the skeleton-like upper part of the body, called « fearsome skeleton-apparition » (*kaṅkāla-bhīṣaṇa*) (46) by the Buddhist *Dharmakośasaṃgraha*. This appearance demonstrates Śani's rôle as exorcist of evil spirits (*bhūta-kṣayanaka* according to the *Dhāraṇīsaṃgraha*) (47). His two upper hands are provided with a bunch of arrows (upper right) and bow (upper left); the lower right is distinguished by a noose and *vitarkamudrā*, the lower left by *va*-

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(44) Mitra, *op. cit.*, pp. 33 f., 36.

(45) Iconographic texts know only the simple *daṇḍa*; cf. Mitra, *op. cit.*, pp. 33-35.

(46) Pal, *op. cit.*, p. 67.

(47) Pal, *loc. cit.*

radamudrā. Next to the two archers, mighty standards (*dhvaja*) have been placed in the wagon of the chariot. The charioteer holds five tortoises by reins in his hands. Noteworthy is that the Buddhist texts from Northeastern India and Nepal are in agreement that Śani's mount is a tortoise (48) — so also the Jaina text, *Vāstusāraprakaraṇa* (49) — while in Hindu texts horse, vulture, snake and buffalo are named (50). The tortoise is a very fitting mount or draught-animal for Śani, as the period of rotation of this "slow walker" (*śanaiścara*) lasts 30 years. On the Hariśaṅkara, the *vitarkamudrā* on the lower left hand is omitted, as well as both standards (fig. 16).

Lastly, Rāhu as the protector of the north follows left from the north portal (fig. 17). Provided with a breast-harness, shawl over the shoulders and a crown, he swings sword and shield in both upper hands, the lower left one bears a trident (*triśūla*), the right one promises granting of wishes. The lower portion of his body disappears into a segment-like cloud, which, in turn, disappears behind a lion-seat (*siṃhāsana*) (51). Similar is his depiction on the Hariśaṅkara temple (fig. 18).

In India there is no representation of the planet gods as directional planets (distributed on all sides of the temple); accordingly Ketu, after having been inserted into the circle of *grahas* (see p. 139) was never omitted in Indian art. We found the idea of a directional planet (*diśāṃ grahāḥ, Amarakośa* I 3) theoretically for the temple type named Kamala in the *Viṣṇudharmottarapurāṇa* (p. 140) without possessing an example of this type in Indian archaeological monuments. Two of the textually attested structural features of such a temple type are, however, actually present here in Nepal, a good 1000 years after the composition of the *Vdh*, the temple being a central structure, and the directionally oriented planets without Ketu. The series begins with Sūrya for the east and, proceeding clockwise, ends in the northeast with Candra (52). Not least, the unusual sequence guarantees their character as the guardians of the world, homologous to the *dikpālas*, as being representatives of the four main and four subsidiary directions (53). This specific character caused the exclusion of Ketu, here, whereas he is included in all other *graha* groupings in Nepal, just as in India (fig. 19) (54).

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(48) Pal, *loc. cit.*; *Dharmakośasaṃgraha* mentions once *Kacchapa*, once *Kāka*.

(49) Mitra, *op. cit.*, p. 36.

(50) Mitra, *op. cit.*, pp. 31-36.

(51) Cf. description in the Buddhist *Kriyāsaṃgrahapañjikā*: *meghasthārdha-kāyaḥ* (Pal, *op. cit.*, p. 68). For *siṃhāsana* cf. Mitra, *op. cit.*, pp. 33 f., 36.

(52) The usual sequence is *Sūrya, Soma, Maṅgala, Budha, Bṛhaspati, Śukra, Śani, Rāhu, Ketu*.

(53) On the wall of the Viśveśvara temple also the *dikpālas* are depicted, as small stone reliefs inserted into the brick walls: Indra (east wall, right), Agni (east wall, left); Yama (south wall, right), Nirṛti (south wall, left); figures on west wall missing; Kubera (north wall, right), Īśāna (north wall, left).

In addition to this comes another important consideration. If Ketu were understood as being the descending node of the lunar orbit, or as Rāhu's body, as is claimed in the pertinent literature (see note 20) then he would be indispensable (just as the sun's acolyte *Daṇḍanāyaka* requires *Piṅgala*, Viṣṇu's *Cakrapuruṣa* requires *Gadādevī*, etc.). The absence of Ketu means thus nothing else but that Ketu remains what he was from the beginning: the comet god. Rāhu, however, represents the ascending and descending nodes of the lunar orbit, head and tail of the dragon.

Not a single textual description of the planets corresponds to the main characteristics of the wooden reliefs under consideration. The basic artistic conception of the reliefs rests upon an assimilation of the planets into the traditional mode of depicting the sun-god with a chariot drawn by (seven) horses (and attendant figures in pairs).

This conception reminds one, indeed, of an ancient puranic cosmographic tractate, which assigns a team of horses to all the planets (55): in the literary iconography, this idea was taken up only by the *Vdh* III 64 (56), in the artistic practice of India it was never utilized. Only late, in the 17th century, we find the realization of the idea of a wagon for all the planets, and indeed, with draught-animals, which already in more ancient times, textually and/or in images, had been partially developed as mounts or accompanying animals of the *grahas* (57).

The comparison of the *aṣṭagrahas* on Hindu temples in Patan with iconographic texts makes it clear that here or there exists a specific closeness to the Buddhist texts of Bengal and Nepal. This is only surprising on first sight. On the one hand, we know that Tantric Buddhism and Tantric Hinduism have a tendency to assimilate and exchange individual gods and groups of deities; on the other, is to be considered that, up until now, we hardly know Hindu iconographic texts concerning the world of the gods in late Hinduism in Nepal, a gap which perhaps can be closed by the manuscript search of the German Nepal Research Center (58).

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(54) Ketu is in each case below right.

(55) Kirfel, *Kosmographie*, *cit.*, pp. 130, 137, 141 f.

(56) Cf. Mitra, *op. cit.*, p. 31.

(57) For discrepancies between textual *vāhanas* and extant *navagraha*-cum-*vāhana* lintels cf. Mitra, *op. cit.*, pp. 18 ff., pls. VIII-XI, and Pal, *op. cit.*, pp. 43 ff.

(58) The Nepalese *Puraścaryārṇava*, a printed compendium of *dhyānas* on Hindu deities, has now been consulted by me, but without any profit for our subject.

Introductory Notes to the Epistemology of Patañjali

by Beniamino Melasecchi

The period in which Patañjali composed his aphorisms (variously placed between the 2nd and 5th century A.D.) is not relevant to establishing an historical phenomenology, since the *Yoga-Sūtra* (1), rather than being an invention of the author, are the ordering of a body of thought undoubtedly handed on from an earlier age. Nor is it our job, in this brief essay, to examine the origins of the phenomenon which in all likelihood date back to pre-Vedic times. If there is anything new to observe this is due to the peculiar character of the epistemological status that *Yoga* is now acquiring, partly through the influence in theme and exposition of the Buddhist Schools and classic systems like the *Sāṃkhya.* The *Sāṃkhya*, indeed, contains the philosophical premises of systematic *Yoga.* Patañjali's *Yoga* differs from the *Sāṃkya* only in marginal questions and by reason of contrasts that are more of form than essence, or at any rate, with the passage of time and a more convenient hindsight, this is how they appear to us. The most obvious contrast between them is that, as regards the divine, the *Sāṃkhya* is agnostic while *Yoga* is theistic (2): but it is a discursive rather than real difference, a question of method, for no Indian school accepts deterministic and pragmatic premises, "logic" itself being fundamentally "metaphysical".

In considering Patañjali's text we shall, without discrimination, make use of Vyāsa's commentary (7th-8th century) which, alike from choice and literary practice, is taken as its natural complement.

* * *

The work is essentially a pratical manual of *Yoga*, but at the same time it contains elements of a theory of thought, a magic grammar (*sphoṭa*) (3), an analytical and active psychology, a psychosomatic doctrine of perception, and a theory of Nature, Time and Space. These and other features are not logically investigated, for abstract speculation is a quality of mind lacking in the Indian thinker; but they are presented as a logical assumption based on a like number of synthetic conditions, the direct outcome of inner activity: the "powers" (*vibhūti*), products matured by a corresponding degree of asceticism; but "the powers are impediments to trance contemplation" (⁴), since their nature is consequential and not absolute; they are, in fact, obstacles to true discipline.

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(1) Patañjali, *Gli aforismi sullo* Yoga (Yoga Sūtra) - *con il commento di Vyāsa,* introd. and transl. by C. Pensa, Torino, 1962.

(2) Cf. YS I 24.

(3) Cf. YS III 17.

The end of *Yoga*, then, is not to grasp the magic dimension and the "advantages" that this entails, but "trance contemplation" (*samādhi*). Of interest to us is not so much the end itself but the means employed to realize it and the limitations and obstacles hindering this: we are in reality concerned to perceive the theory of knowledge which made possible the *Yoga* formulated by Patañjali. This is a very ambitious undertaking but a legitimate one when *Yoga* is viewed as the emblematic expression of an age, the spiritual tendency and final embodiment of a whole cycle of Civilization whose vehicle of expression, now inactive, was a very powerful Feeling, and which grasped and solved the problem of knowing through luminous transcendence of self.

Ontological reflection on which *Yoga* rests is not in fact the outcome of a philosophical need but Inspiration; since the philosophical need is born of a situation of otherness as regards the object of investigation, a situation not felt by the ancient Indian, as will be made plain below, since otherness is experienced by him as an inner quality of the "subject". This particular cognitive tendency of the Indian world could be defined as "physiological" and not speculative even though it gives rise to a logical construction. It was not speculative but corresponded to an objective inner equation whereby the ancient meditator approached the self not as though it were a thinking ego fettered to a cerebral structure, but a sentient ego, Feeling itself — and hence the Soul — forming the original individual nucleus (*puruṣa*) capable of incorporeal movement, of expansion in a Space made up, and thus perceived, of its own substance.

Yoga, then, raises again indirectly what was the dominant problematic question of Upanishadic and Vedic speculation as regards the *ātman-bráhman* relationship, suitably clarifying it through analysis of *Sāṃkhya*.

* * *

The individual Spirit (*jīvātman*) must realize the Spiritual Man (*puruṣa*) which is its pure archetype. The individual Soul is assimilated to the universal Lord (*Īśvara*): « As the Lord is pure Soul, calm, detached and free of impediments, so also is the (individual) soul which knows as a reflexion of the mind » (⁵).

(⁴) YS III 37.
(⁵) YS I 29.

Mediation and the job of knowing are not, however, entrusted to the mind (*citta*) as it might be legitimately supposed today; indeed, the whole attention of the soul is concentrated on arresting the mind's functions. In actual fact, mediation does not occur since this is the task of cerebro-mental activity; and knowledge that is Immediate (non-mediated) thus manifests itself. The rational is superseded by the inspirational moment: the Immediate (not the "immediate" seized upon by the inner sense of the mind and always mediated by it, for the authentic immediate, in fact, arises through the mind being void) is "trance contemplation" no more no less. The latter neither precedes nor follows mediation; it is a diachronic moment, for Time is the category of mediation, that is, of mental functions, and the Moment the univocal mark of the Immediate.

Time is, then, viewed as a succession of rhythmic moments, different and unrepeatable, and not according to a "historical" dimension. « Time is devoid of reality, it is only a concept designated by a noun; it appears as though it were something real to common people who are immersed in ordinary experience. The moment on the other hand is real and represents the essential constituent of this succession which consists of an immediate sequence of moments » (6).

The term *citta* does not designate *eo ipso* what is mental or the cerebral organ, but above all the correlation with the consciousness that is proper to it, therefore the idea of a subjective nucleus like *abaṃkāra* or immanent Ego (Ego in so far as it is agent: *abaṃ-kāra*) which arises from the meeting with the *manas*, the inner sense that coordinates elements of outer experience with the senses which serve to mediate the latter.

In what ultimately can be defined as consciousness of Ego, karmic impulses (*saṃskāra*) are likewise active, collect and cohere there as will be explained later.

In referring to the Self thus conceived, it is perhaps right, then, to speak of a further inner sense (pratically a product of it) that is barely aware of itself and only in so far as it feels its own presence more by the power of a primordial istinct than an intuition of its own discriminating autonomy.

An istinct, then, and not a consciousness of Self: an instinct, nevertheless, that is pure and devoid of the longing for what it cannot see as different from itself: Nature. The latter, originally perceived as one in its luminous movement and purified of mental infection, is the authentic basis of the Self: Self that is Nature (7).

Alike for the mental Self (*abaṃkāra*) and the Self realized through Yoga, the necessity of self-awareness is not posited, but rather that of a "recognition" of the uniqueness of the representation both of Self and Nature, barely impeded by the germ of mental awareness that is already beginning to manifest itself; and this is the *raison d'être* of the technique of suppressing all states of consciousness (*cittavṛttiinirodha*), a process at once cathartic and liberating.

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(6) YS III 52.

(7) Īśvarakṛṣṇa, *Le strofe del* Sāṃkhya (Sāṃkhya Kārikā), introd. and transl. by C. Pensa, Torino, 1960, I 22.

That instinctive *dynamis*, the vehicle of feeling, which is so powerfully active in *Yoga* is certainly not that conditioning the man of today, for in the latter it is deeply bound to the neuro-sensory organ, and is so corrupted by and reflected in the mental as to prejudice the mind's logical activity and theoretical capacity. There is a shift from an instinct luminously flowing from Nature to an instinct subjected to Nature; hence the inevitable strengthening of this instinct through assiduous practice of *Yoga* can only stimulate lower Nature instead of presuming to annul it.

* * *

The mind-consciousness (*citta*) appears to comprise three essential qualities (*guṇa*), its functions (*cittavṛtti*) being determined by their activity: *sattva* (equilibrium), *rajas* (activity) and *tamas* (darkness). These are in continual movement if not conflict producing series of ideas, impulses, impressions etc. (8). The tumult and constant fluctuation which accompanies them is referred to as *vṛtti* (modifications) which may also exist in the latent state of karmic impulses like *saṃskāra*, and when these emerge into consciousness again they go back to being *vṛtti*. In the *citta* the ancient *yogin* saw the inevitable manifestation of the effect of *karma* which is operative in its functions, that is, in activity of the mind and senses. The functions may be impure or pure (9), the impure ones (*kleśa*: ignorance - *avidyā*, egoism - *asmitā*, passion - *rāga*, aversion - *dveṣa*, attachment to life - *abhiniveśa*) being causes of darkness since they are false concepts (10): in short, no real object inheres in them, but only impulses that « swell the stream of causes and effects and ... being mutually dependent, bring about the maturing of *Karma* » (11).

Karma, which is the transcendent and yet immanent link between human actions, does not act directly and blindly upon them; it manifests itself upstream, as it were, in the activity of the *guṇa* upon whose brightness or darkness the nature of the pure or impure function depends. This is the presupposition of "effective" action; hence, the interruption of the mental coincides with freedom from *karma* and from the cause of action, giving rise to a condition that makes no distinction as regards acting and non-acting alike, a condition that is peculiar to *puruṣa* which is contemplative.

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(8) YS I 2.

(9) YS I 5.

(10) YS I. 8.

(11) YS II 3 in Vyāsa's commentary. « The deposit of *Karma* has its roots in impurity and is experienced either in a visible or invisible life (that is, in this or in another life) » YS II 12.

The impure functions (*kleśa*) are, therefore, the source of "false concepts" and the error of Ego: « Nescience is to see eternity, purity, happiness and the self in what is ephemeral, what is impure, what is pain and what is devoid of self » (12); it is in fact the dignifying of appearance by taking it as being, the tragic ambiguity that *Yoga* seeks to resolve with the elimination of the thinking activity, of all the functions of the *citta* including the most luminous and most *sattva* inspired (13). The *sattva*, indeed, does not shine with its own light, though it is the transparent feature of the mind; it purports to be "other" (14) and is not autonomous in nature — in fact, to take it as such is the cause of cognitive alienation (15) which is tantamount to the assertion of the ego that comes with the wrongful identification of the power of the soul with the power of the mind (16).

The possibility of a subjectivization of the cognitive process, even in an embryonic stage of ego, is thus wholly precluded, the principle of identification being considered solely in its conformity to the mental, the sense of self (as *puruṣa*) being acquired only on condition that its mental *māyā* is extinguished. The soul is then in a position to know, having achieved cognizance of itself as an autonomous entity, only when the mind, once conflict and confusion are at an end, becomes perceptible in acquiring its form: from an instrument of illusory knowing it becomes known, and from an unreal subject of self it is transformed into a real object since it has taken on its true dimension which is "servile".

The Soul is the motionless centre of the cognitive process where the dynamic function is entrusted to the mind which, nevertheless, does not know but reflects objects as a crystal does light. The Soul is, then, the fruitive subject, an immutable spectator never to be likened to the mind (17); its nature is pure vision, the nature of the subordinated mind (18), operating only for its particular purpose which is to know while avoiding the cerebral process: the mind and the world are postulated only in terms of the Soul and disappear as soon as they are known (19).

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(12) YS II 5.

(13) « Universal supremacy and omniscience are attained by the *yogin* who has achieved pure discernment of the difference between *sattva* (of the mind) and the soul » YS III 49. « Fruition is a form of indistinct knowledge that leads us to view *sattva* and the soul, that are in reality quite separate, as confused together. Now since *sattva* exists for the end of something other, in order to achieve knowledge of the soul it is necessary to concentrate discipline on what exists for its own end » YS III 35.

(14) YS IV 19.

(15) Cf. YS II 26 in Vyāsa's commentary.

(16) « Egoism corresponds to the identification of the power of the seer with the power of seeing » YS II 6.

(17) Cf. YS II 20 in Vyāsa's commentary. Cf. *Sāṃkhya Kārikā, cit.* I:6. « The soul, which is one, is indifferent like a member of a theatre audience; nature, which is one, ceases its activity when it knows it has been seen. In spite of the contact between the two, no impulse to creation exists ».

The inhering of the Soul in the mind (20) provokes pain and nescience (21) which is the same as saying the manifestation of *karma*. This explains the need for liberation understood as a verification and perception of the authentic nature of the fruitive subject (22), the consequence of a distinction which is the elimination of mental activity through meditation: the removal of the cause of nescience and the occurrence for the Soul of a fresh state of abandon and peace — liberation (23).

In *Yoga*, liberation is certainly not a state of mystical exaltation or animistic psychism, but a restoring of the *puruṣa* to its original state which is achieved by dissolving the constituent elements of the *citta* (24). Restoration presupposes the cancellation of historical Time already referred to, and re-immersion in Time which is original, unconditioned and indeterminate because it is devoid of mental mediation, the physico-mental structure of Space, Space and Time now being woven of the same woof. Only here does the *puruṣa* find the substance of which it is composed, and only here does it attain the principle of "identity" and identification that, however strange it may appear, is born of that very absence of otherness which instead, to begin with, should suggest differentiation.

The concept of liberation that has been enucleated is perfectly compatible with the logical and metaphysical requirements of Patañjali and his commentators; for whom, on the contrary, is not posed the different problem of liberty. While being an inner need and impulse, liberty, through its own internal logical structure, is a question that can be solved only by conversion of the mental and not its elimination.

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Dissolution of the activity of consciousness (25) is the element characterizing *Yoga* as a meditative science peculiar to a human type "physiologically" ancient and "oriental" in the sense indicated above, and the outcome of a particular theory of knowledge originating in a different relationship between Man and Nature or a self-established objective World. *Prakṛti*, in fact, is a dynamic phenomenon (26) for the ancient Indian and not reducible to physical laws where mental abstraction is valid. The latter, however, is part and parcel of the mind and therefore participates in the activity of the *guṇa*; hence, perception (27) does not occur as an end in itself but as the fruition of motionless and eternal *puruṣa*: the liberation from the mind coincides with the liberation of Nature: the objective of the Soul is attained (28).

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(18) « The soul, which does not agree with objects, becomes conscious of its own cognition when the mind takes on its form » YS IV 22.

(19) « The existence of the visible is only in terms of the end of the soul » YS IV 22.

(20) « The cause of "all that is to be avoided" is the union between seer and the visible » YS II 17.

(21) Cf. YS II 24.

(22) Cf. YS II 18 Vyāsa's commentary.

(23) Cf. YS II 25.

(24) Cf. YS II 27 Vyāsa's commentary.

(25) Cf. YS III 51 Vyāsa's commentary.

In reality, in Yoga epistemology there is no pragmatic, but only a provisional and as it were methodological dualism (though a similar prospect should not be confused with the rational requirements proper to Scepticism) where the term of comparison for the subject is not Nature but the mind associated with it. Broadly, it can be said, then, that dualism between Soul and mind exists, but only in the way it can exist between light and its reflection. This prevents Nature being viewed as an unreal and lifeless element which is, instead, the subject of investigation by modern epistemologies: a different relationship between the knowing organ and the known obtains, for in *Yoga* it is *puruṣa* which authentically knows and not rational thought.

Prakṛti, freed from the attachments of the mental-sensory system, reverts to being a vision of the Soul, only now offering itself as objective reality (29), not contradicting the individual *puruṣa*, becoming one with Universal Soul: *Natura naturans est Deus.*

The perception of Nature, then, as a manifestation of divine reality is not hindered by its being presented as objectively noumenal, but by the persistence of the mingling of Soul and mind. The exclusion of thinking activity from the cognitive process is therefore justified together with an opening of the way to deep feeling, the access to transcendence that is immanent for the ancient Indian, for no cerebral mediation is required, this indeed being the obstacle to remove (30).

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(26) Cf. YS III·13 and in Vyāsa's commentary.

(27) Cf. YS IV·16 Vyāsa's commentary.

(28) *Sāṃkhya Kārikā, op. cit.* I 59. « Just as the dancer stops dancing after having shown herself to the audience, nature ceases its activity having manifested itself to the soul »; SK I:62. « Therefore no soul is bound or freed or transmigrates, it is nothing but nature, with its multiplicity of states, that is bound or freed or transmigrated », in Gauḍapāda's commentary: « Through knowledge of the distinction between soul and nature the true being of the soul is made manifest ».

(29) Cf. YS IV 16.

(30) Cf. SK *op. cit.* I 68. « Separation of the body having occurred and the activity of nature having ceased, since its end is achieved, the soul attains to absolute and definitive isolation ».

Yoga is the sacrificing of mediation for the Immediate.

Mediation, proceeding by opposites, is what is opposed to the reality of *puruṣa*: all the empirical categories of Nature including psycho-mental ones: Time as historical becoming, Space as limitation of points, the physical body since it is the outcome of this Time and Space, the Ego that is bound to the body, to the mental (*manas*), to consciousness (*citta*), the self that proceeds from Nature which comprises all, even the coincidence of opposites: alike dominated and dominant.

Mediation as a cognitive aid is unknown to Yoga epistemology that looks upon it only as *māyā*; hence it is not converted; there is no question, indeed, of converting an "illusion" even though a powerfully attractive one: there is only the sacrificing of it.

Sacrifice in *Yoga* is the ritual act operating from man to the Cosmos that in the process of identification of the human, replaces the formal Vedic rite (*yajña*) but preserving its intrinsic meaning unaltered: the cancellation of sense categories related to transient consciousness and the evocation of a transcendent reality.

Whereas Vedic Sacrifice called for one or more officiants, here the officiation is direct; it represents the great transition from the *Veda* to the *Upaniṣad*; it is the person who is born but not yet the individual. The essentials of Sacrifice do not change, for beyond formal differences the goal is the same. To be successful, the Vedic rite envisaged the need for operative accuracy in the various "gestures" required, "gestures" that microcosmically reproduced the cosmic act of Creation.

The ritual "gestures" of the *Veda* become inner "gestures" in *Yoga*: the eight *aṅga* (parts) or disciplines regulating its practice (31): the prohibitions (*yama*), disciplines (*niyama*), bodily postures (*āsana*), the technique of breathing (*prāṇāyāma*), the release of the mental self (*pratyahāra*), concentration (*dhāraṇā*), meditation (*dhyāna*), and trance contemplation(*samādhi*).

It is not the specific purpose of this study to examine the eight *aṅga* in their peculiar mode of operation: the way, that is, in which by acting at a psycho-physiological level, at times even roughly (and *Haṭha Yoga* is here an extreme example), they justify their own use. Yet it must be pointed out that the *aṅga* are the dynamic essence in the Sacrifice of physico-mental mediation. As the latter, indeed, constrains *puruṣa* within limits that are inadequate to it, causing its discharge to some extent into a reality that is existentially unauthentic, it must be constrained in its turn. This accounts for the moral rules and prescriptions (32), the positions of the body (*āsana*) (33) that are justifiable in so far as they force the latter into postures that, uncongenial by nature, lead it, once resistence has ceased (34), to a state of non-differentiation as regards its own movements, fostering an inner movement no longer impeded by the latter. This, then, explains the influence on breathing (*prāṇāyāma*) (35) the normal action of which, by a technique of inhaling and breathing out, is contradicted; it acts on the blood and indirectly on the cerebral organ through an irregular supply of oxygen, blocks the action of the outer senses which as lower instincts are selected as vehicles by the blood, and favours inner autonomy, giving rise to the state of *pratyahāra* — that is, release from the mental self and thus from the senses (36).

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(31) YS II 29.
(32) YS II 30,31,32,33.
(33) Cf. YS II:46.

In view of the stages and ways it is made manifest, we could look upon this *iter* as a heroic one, and yet, we would add, it remains ever bound to necessity: the necessity of denying mediation that in reality is no longer mediation. For the activity of mediation can only be expressed when two opposite or similar things are mediated in a meeting-place which is mental, in other words, rational thought. This mediation, not being sensed as such, is undergone as a necessity to be suppressed because of inadequate self-recognition inherent in it, of a sort of metaphysical impossibility legitimate in Yoga epistemology but inconceivable in a modern thinker.

The apparent contradiction of denying something that, as was seen, we do not possess, is clarified when we fall back on a historico-philosophical perspective impossible in ancient times: we know about the contradiction because we know about mediation and we make use of it; whereas once this was not known but mediation was "felt" as an inner sense (*manas*) that being bound to the body prevented the transcendental experience. It was not, then, a question of liberation of the mental, but from the mental dimly felt.

The *āsana* or the *prāṇāyāma* that aroused in the *yogin* the "primordial instinct" in the sense outlined, would arouse in the ingenuous experimenter of today the lowest or most subnormal instincts, since the ancient and legitimate "primordial instinct" has degenerated into these through the indisputable presence of mediation that was seen once not to exist.

Yoga, then, is the necessary Sacrifice — and it could not be otherwise — of mediation for the Immediate. And where something is imposed as a necessity there is no possibility of freedom, but only of freedom from the necessity itself. This is why in the whole of ancient Indian thought there is no trace of the problem of liberty, but only that of liberation or at most of a "void" or *nirvana*, etc. Nevertheless, this (the problem of liberty) is the sign of an inner reality inaccessible to dialectic, and yet only through this could it come into being

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(34) YS II 46.
(35) Cf. YS II 49,50,51,52.
(36) YS II 53.

Han and Shen-tu
China's Ancient Relations with South Asia

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I. *Han Relations with South Asia*

In our modern world the term South Asia conventionally covers the countries India, Pakistan, Bangladesh, and Ceylon (Sri Lanka), and the dominant nation in this region is India. In ancient history there was a series of Indian empires, but no ruler ever succeeded in conquering the whole sub-continent, whereas in China the northern and southern regions usually found themselves united under the Son of Heaven on the Dragon Throne. As matters stand at present, India and China are neighbours sharing a common frontier; but in the time of the Hàn Dynasty, roughly two centuries before and after the beginning of the Christian Era (to be precise, 202 B.C. - 8 A.D.; 25-220 A.D.) their borders were far apart. Lofty mountains, arid deserts, and hostile tribesmen barred the way to would-be travellers between South Asia and East Asia.

Nowadays there are three possible ways of journeying between India and China: by land, sea, or air. In ancient times all three were considered feasible, though the air routes were reserved for Buddhist missionaries: witness the fabulous tale of intercontinental flights undertaken by the Buddha and his disciples, but these stretch our credulity to breaking point. Nevertheless, it is a fact that in the 3rd century B.C. the Indian Emperor Aśoka despatched imperial envoys and Buddhist teachers to kingdoms near and far, including the Mediterranean world, though there was apparently no such embassy to China (¹).

Actually it is not known when Buddhism first arrived in China, but Zürcher, the modern chronicler of « the Buddhist conquest of China », postulates that it « must have slowly infiltrated from the North-West, via the two branches of the continental silk road which entered Chinese territory at Tunhuang », and

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(¹) Basham (1967: 53-55) gives a translation of the edict of Aśoka which names foreign kings and countries reached by his *dharma* (religious teaching). For legendary material on missions to lands beyond India see Bagchi 1957: 765.

this would have occurred at some time around the beginning of the Christian Era, when Chinese power in Central Asia became consolidated and Chinese writings make their earliest mention of Buddhism. Nevertheless, Zürcher adds, Buddhist merchants and monks may well have come and settled in China long before this (2).

That Indian religion and Chinese silk travelled the same road (in opposite directions, of course) seems eminently reasonable and in conformity with the historical principle that religious ideas and artefacts are carried from one country to another by way of the established trade routes. What is taken to be one of the first references to Chinese silk in Indian literature dates from the time of Aśoka or slightly earlier: the Sanskrit term *cīnapaṭṭa* ('China cloth') is found in the famous political treatise entitled *Arthaśāstra,* which is attributed to Kautilya, the Machiavellian mentor of King Candragupta (who founded the Mauryan Empire in the Ganges Valley late in the 4th century B.C.). Furthermore, the *Manusmṛti* (*Laws of Manu*) contains references to silk, as also the two great epics, the *Mahābhārata* and the *Rāmāyaṇa.* In all four cases, however, difficulties of dating and differences in interpretation of words and names render their testimony ambiguous (3).

What evidence does exist, then, for communications by land between ancient India and China? From early in the Christian Era we have the Alexandrian work entitled *The Periplus of the Erythraean Sea,* which tells us a great deal about India in the 1st (or possibly 3rd) century (4). The author states that at the end of the sea, in the north, there was a land called This, in which lay a very great inland city named Thinae, whence silk (in a raw state, or as spun yarn, or as woven cloth) was brought on foot through Bactria to the port of Barygaza (Bharukaccha, modern Broach, in Gujarat, northwestern India); from there it was carried down the Ganges River to the opposite coast and then on to Damirica, the Tamil region of South India, or in other words the Dravidian country of the Chera, Pāṇḍya and Cōḷa kingdoms. The land of This, however, was not easy of access and very few of its people ever ventured forth from it (5). Presumably This with its city Thinae was China, but if few Chinese came from there to

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(2) Zürcher 1972: 22-23.

(3) Yü 1967: 152-153. See also n. 52 below. Srivastava (1968: Appendix A, 268-303) provides a list of commodities attested in ancient source texts. Tucci (1971) argues that Kautilya's Cīna-paṭṭa was not brought from China but from a place named Cīna (Tibetan Tsi-na) in the Himālayas, more specifically Kanawar, the upper Sutlej valley, which still produces a woollen cloth of exceptional quality. However, Cīna is named as a port in the early Buddhist work *Milindapañha*: see n. 22 below. See also Hennig 1944: 218-221.

(4) Schoff 1912. On the date of the *Periplus* see Basham 1968: 94-96 (article by P.H.L. Eggermont).

(5) Schoff 1912: 48.

India then it would seem that it was not from want of trying on their part.

Thus, in the reign of Han Wu-ti (141-87 B.C.) the imperial envoy Chang Ch'ien was sent on an assignment to Central Asia, or "the Western Regions" (Hsi-yü). This mission was unsuccessful in its primary object of making an alliance with the Yüeh-chih people (the Tokharians, Indo-Scythians) against the dreaded Hsiung-nu (Huns) (6). These Hsiung-nu had caused the Yüeh-chih to flee into Ta-hsia (Greco-Iranian Bactria) and were limiting the movements of the Chinese, including Chang Ch'ien himself, for he was twice held captive by them during the course of his protracted but abortive mission.

Yet all was not in vain, for in 122 B.C. Chang Ch'ien was able to submit a valuable report to the Emperor Wu, and this stimulated Chinese trade and expansion in the Han period. West Asian countries mentioned by him were An-hsi (Parthia) and T'iao-chih (Mesopotamia), while India was covered under the rubric Shen-tu (7). It is not hard to recognize behind the form Shen-tu the name of the Indus River, Sindhu, known to the author of the *Periplus* as « the river Sinthos, the greatest of all the rivers that flow into the Erythraean Sea » (the Arabian Sea). For Chang Ch'ien, therefore, Shen-tu would have been the land of the Indus River, lying to the south of Bactria, the country in which he resided for a year.

Chang Ch'ien noted in his submission to the Emperor Wu that traders from Szechwan were travelling all the way to India to sell such commodities as bamboo canes from Ch'iung and cloths of Shu, some of which finished up in Bactria and were seen there by Chang Ch'ien himself (8). Notice that this is a different route from the one described in the *Periplus*, for here Bactria is at the end of a road passing *through* India rather than at the point of entry *into* India. What we have here, in fact, is the famous "Burma Road", the Yünnan-Burma-India corridor of commerce (9).

Of course, we are at liberty to reject Chang Ch'ien's evidence as faulty, by pointing out the apparent absence of silk in this trade, and by noting that bamboo also grew wild in north-eastern India; and if the cloth was simply cotton, then this too could have been made in India, since India had cotton long before China did (¹⁰). Consequently, Chang Ch'ien might have jumped to the wrong conclusions. Nevertheless, the Emperor Wu was inclined to believe Chang Ch'ien, and so he sent him out on a further expedition to map out a route from Chien-wei in Shu (Szechwan). This proved to be another unattained goal, since Chang Ch'ien's every move was blocked by tribal peoples who murdered any Han envoys who fell into their clutches. In this regard the K'un-ming tribes (in present-day Yünnan) were the worst offenders. Perhaps these South-Western Barbarians were simply barbarous barbarians, wholly devoted to plunder and robbery; this is certainly the image imparted to them by the Grand Historian Ssŭ-ma Ch'ien in his *Shih chi*, in the section recounting the missions of Chang Ch'ien. On the other hand they may have deliberately intended to set up a blockade so as to protect their own commercial interests (¹¹). However that may be, Ssŭ-ma Ch'ien says that this mission picked up one useful piece of information: about a thousand *li* (300 miles or so) west of the K'un-ming region there was a state called Tien-yüeh where people customarily rode elephants, and merchants from Shu sometimes went there with their local products on "unofficial" trading expeditions. Tien-yüeh might well be another name for India itself, but if not it might refer to Burma or Yünnan.

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(6) Whether the Hsiung-nu barbarians who plagued China are related to the Huns who invaded Europe is a matter for debate: see R.N. Frye, *The Heritage of Persia*, London, 1962, 313, n. 38.

(7) The reign of Han Wu-ti is chronicled in the *Shih chi* of Ssŭ-ma Ch'ien. For the mission of Chang Ch'ien see the translation of Watson (1961: II, 264-296). On An-hsi (Parthia) and T'iao-chih (Mesopotamia) see Colless 1972; the name Antiochia has been suggested as the basis for both these forms, but my preference is for Arshak (the name of the founder of the Parthian Arsacid Dynasty) and Tigra (the Tigris River).

(8) Yü 1967: 94 and 112-114.

(9) Liebenthal (1956) suggests that the Burma Road was not used till T'ang times, but he really means the route that passes through lower Burma; the passage through upper Burma and Assam still seems feasible for ancient times.

The existence of such a trade route is supported by two items of archaeological evidence: on the one side, Han period tombs in the interior of China contain amber beads, and amber is a product of Burma and Yünnan; on the other side, excavations of tombs belonging to the ancient South-Western Barbarians in Yünnan have yielded objects of pure Han Chinese style (copper seals, mirrors, lamps, buckles, lacquer wares) all products of central China in Han times (¹²). Here we have ample testimony to a south-western passage for goods from China, even if the Imperial Government was not able to control it. Moreover, silk was produced at a very ancient date in Szechwan and may have also been transported along this route.

Certainly there is evidence for the early movement of this precious material along the Central Asian Silk Road, which must have led not only to West Asia but also to South Asia, in line with the itinerary allotted to silk products in the *Periplus* (China to north-western India via Bactria). Thus, on the Han site of Yü-men Kuan, west of Tun-huang, a piece of silk has been found, datable to

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(¹⁰) Camman (1958) argues in this negative fashion; but he adds that Taxila, which stood on the Silk Route from Han China through the Khyber Pass, has yielded a metal cocking lever from a Han crossbow as evidence of contact between India and China.

(¹¹) Watson 1961: II, 270; Yü 1967: 114.

(¹²) Yü 1967: 115-117. He also cites the case of the King of Shan (taken to be in Burma) sending tribute to China via Yünnan in 120 A.D., and other barbarians doing likewise in 94 and 97 A.D.

some time around the commencement of the Christian Era (toward the end of the Former Han Dynasty) and with Brāhmī script on it (13). Further westwards, Han silks are in evidence at Khotan, a city which undoubtedly had commercial links with India (14). A coin issued by the last Greco-Bactrian king in north-western India, Hermaeus (*c.* 50-30 B.C.), was found in Chinese Turkestan, and from Khotan comes a much defaced coin which apparently bears his name and has a legend in half-obliterated Chinese characters (15).

The Silk Road to India and to Rome was no easy thoroughfare, and possibly the Chinese products were sometimes passed from hand to hand along the route. The compiler of the *Sung shu* recognized the difficulties presented by this road to the envoys of the two Han Dynasties, but he pointed out that traffic in merchandise had nonetheless been carried on by consigning it to mercantile ships in the port of Chiao-pu (Tongking) (16). From the Roman Empire (Ta-ch'in) and India (T'ien-chu) came all the precious things, the *Sung shu* adds, and two items in its list are of interest to our case, namely pearls and rhinoceros horn gems, for in an important section of the *Ch'ien Han shu* (compiled by Pan Ku in the 1st century A.D.) we read of Chinese missions to a western country called Huang-chih, in quest of lustrous pearls and living rhinoceroses (17).

To reach Huang-chih from China a voyage lasting about twelve months was necessary. It was in the time of Han Wu-ti (141-87 B.C.), Pan Ku declares, that China first came into communication with this region. Furthermore, right at the beginning of the Christian Era, Wang Mang, who later founded his own Hsin Dynasty (9-23 A.D.), was coming into power, and, desiring to extend his prestige, he sent a request to Huang-chih for a live rhinoceros (or rhinoceroses). That the animal (or animals) arrived safely in China seems to be confirmed by Pan Ku's description of the Emperor's garden in the capital city, Ch'ang-an (elsewhere in his *Ch'ien Han shu*): « In the interior of the imperial park are unicorns from Chiu-chen (Vietnam), horses from Ta-yüan (Ferghana), rhinoceroses from Huang-chih, birds from T'iao-chih (Mesopotamia; probably ostriches) » (18).

But where on earth was this country called Huang-chih? The rhinoceros detail has led to suggestions for its location in Malaya, Sumatra, or even Ethiopia. However, it is more likely that it lay somewhere between South-East Asia and Western Asia, hence India. In fact the debate in recent times has generally confined itself to determining precisely which region of India it was. South India has emerged from the discussion as a candidate with a large following, and in particular the city of Kāñcī (Conjeveram) on the south-eastern coast, though Vañji, the ancient Chera capital in Kerala, on the south-western side of India, has also been offered as a possibility (19).

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(13) Yü 1967: 153; Harmatta 1970, whose findings are summarized in n. 52 below.

(14) Yü 1967: 153-154.

(15) Tarn 1951: 338; but see also K.W. Dobbins, "The Question of the Imitation Hermaeus Coinage", *East and West*, 20 (1970), 307-326.

(16) Yū, 175; Hirth, 1885, 46.

(17) For a translation of this text see Part II below.

(18) Goodrich 1962: 11.

Another view takes Gaṅgā, the Ganges River, as the name behind Huang-chih (20). This has much to commend it, for if the Chinese designated north-western India by the name of its great Indus River (Shen-tu corresponding to Sindhu, as we have seen) then it would seem fitting, or consistent even, to employ the name Gaṅgā for north-eastern India, the region of the Ganges Valley. A prime reason for the voyage to Huang-chih was to purchase exquisite pearls, and the *Periplus* informs us that there was a port named Gangē at the mouth of the Ganges River, which offered muslins and pearls in its markets (21). It should be pointed out, however, that our Chinese texts do not make any connection between Huang-chih and Shen-tu.

Nevertheless it is not being too adventurous to affirm that in the Han period the Chinese Government came into contact with kingdoms on both sides of the South Asian sub-continent, and perhaps also with Ceylon. Certainly silks and other products of China were finding their way by land and sea into India. Moreover, the Buddhist book *Milindapañha* (*Questions of Milinda*, 1st century A.D.) depicts Indian cargo ships sailing all the way to China (22), and it is tempting to imagine the protagonist of this work, the Greek king Menander of Sāgala in the Panjāb region, himself initiating trading missions to China. What we do know is that during the reign of Emperor Ho (89-105 A.D.) envoys from India (T'ien-chu) made several visits to China bearing tribute over the land route, while in 159 and 161 A.D. embassies came by sea, communications in the Western Regions having been cut once again (23).

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(19) Kāñcī for Huang-chih is supported by a large number of South Asian and East Asian scholars; Yü (1967: 174) lists some of the latter. For Vañji (or Vanchi, or Veṅgī) see S. Paranavitana, *Ceylon and Malaysia* (Colombo 1966), 165, n. 35; also Schoff 1912: 205.

(20) Bagchi 1957: 772; Wolters 1967: 268, n. 15.

(21) Schoff 1912: 47. However, Ganges pearls were considered inferior to those of South India; see Warmington 1974: 167-168, citing the testimony of Pliny and the *Periplus*. On the other hand, it was northern India rather than southern India that could supply a rhinoceros. Incidentally, as pointed out by Wang Gungwu (1958: 24, n. 26), the Huang-chih rhinoceros must have been of a different species from those found near China.

(22) Wheatley 1961: 181. The text states that wealthy ship-owners made voyages to Vaṅga, Takkola, Cīna, Sovīra, Suraṭṭha, Alasanda, Kolapaṭṭana, Suvaṇṇabhūmi and other ports where ships congregate. The basic study on texts like these is Lévi 1925. See also Bagchi 1957: 771-772.

(23) For a translation of the relevant text (*Hou Han shu*, 118) see Part II below, at note 45.

Although China may not have sent her own junks all the way to India, nevertheless Han officials voyaged in barbarian ships to South Asia in quest of pearls and other rarities; and they procured these precious articles in exchange for their gold and silk. The *Sung shu* describes the overland roads as rough and hazardous, and the *Han shu* paints a stormy picture of the sea route; but at least one rhinoceros survived the passage across the oceans, while intrepid travellers carrying such goods as silk and pearls, and also Buddhist salvation and Confucian virtue, ensured that relations were constantly maintained between Han and Shen-tu (24).

II. *Han Knowledge of South Asia*

The information available to Han China on the civilizations of South Asia will be considered in detail here. The main extant sources for us to analyse are the description of the voyage to Huang-chih in the *Ch'ien Han shu* (Chapter 28, part 2) and the account of T'ien-chu, alias Shen-tu, in the *Hou Han shu* (Chapter 118).

The first great problem is the identification of Huang-chih, in the important passage appearing at the end of the geographical sections of the *Ch'ien Han shu* (25). There are ambiguities in its sentences and obscurities in its toponyms, but, as Pelliot pointed out in 1912, the forms given to the names of the kingdoms it refers to are in accordance with the normal Han practices of transcription and they bear no resemblance to the mythical nomenclature that abounds in certain other Chinese books of the period. It is history and not legend, Pelliot says, and seems to be made up of two separate reports: the first goes back to the age of Han Wu-ti in the 2nd century B.C., and the second comes from the earliest years of the Christian Era, the time of Wang Mang. A tentative translation will now be given.

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(24) Velgus (1974) argues forcibly that the evidence does not allow us to say that any Chinese found their way to India in the Han period, as the Han envoys were, in his view, probably Yüeh barbarians. In fact he argues that for the following millennium the relatively few Chinese pilgrims and merchants who travelled across the Indian Ocean did so in foreign ships.

(25) For translation and discussion of this text see the following writers (their location for Huang-chih is given in brackets): Pelliot 1912: 457-461 (west coast of India); Herrmann 1913: 553-561 (Aghāzī in Ethiopia); Ferrand 1919: 451-455 (Kāñcī in South India); Luce 1925: 92-99 (doubts Kāñcī); Fujita Toyohachi 1943 (Kāñcī); Hennig 1944: I, 323-330 (Conjeveram or Sumatra); Duyvendak 1949: 9-12 (some country on the Indian Ocean); Wang Gungwu 1958: 16-30 (probably Kāñcī); Wheatley 1961: 8-13 (Kāñcī); Bagchi 1957: 772 (Gaṅgā); Yü 1967: 172-174 (follows Toyohachi's suggestions); Velgus (1974: 81, n. 18), tentatively accepts Conjeveram but he cites J.C. van Eerde (Aceh or Achin) and Chou Lien-k'uan (Ayer Bangis) as supporters of northern Sumatra; Velgus makes no attempt at identifying any of the toponyms in the text; he criticizes Štein (1960) for his faculty translation of the passage.

> « From the barriers of Jih-nan, Hsü-wen, and Ho-p'u it is about five months by boat to the country Tu-yüan.
>
> « Further it is about four months by boat to the country I-lu-mo.
>
> « Again, it is more than twenty days by boat to the country Shen-li.
>
> « Then it is over ten days by land to the country Fu-kan-tu-lu.
>
> « From Fu-kan-tu-lu it is over two months by boat to the country Huang-chih.
>
> « The customs of the people are quite similar to those of Chu-yai [Hainan Island].
>
> « These lands are large and populous, and they have many strange products; they have all offered tribute, ever since the time of Emperor Wu [Han Wu-ti, 141-87 B.C.].
>
> « Chief interpreters [*or* the chief interpreter] attached to the Huang-men [the Yellow Gate, the Imperial Palace] who, together with volunteers, sail off [*or* sailed off] to purchase bright pearls, glassware [*or* beryl, *Pi-liu-li*], rare stones, and strange products, offering gold and various silks in exchange. In all the countries they visit they are provided with food and company, and they are taken to their destinations in the trading ships of barbarians, who also profit from this trade and engage in plunder and murder. Furthermore there are the hazards of tempests and death by drowning in the sea. If these are avoided it takes several years to make the outward and return voyages.
>
> « The large pearls are up to two Chinese inches in circumference.
>
> « During the Yüan-shih period of [the infant] Emperor P'ing [1-5 A.D.] Wang Mang was taking over the government and, desiring to display his majestic virtue, he sent costly gifts to the King of Huang-chih, requesting him to despatch an embassy with a live rhinoceros [*or* rhinoceroses].
>
> « It takes about eight months to sail from Huang-chih to P'i-tsung, and two [*or* eight] months more to reach the frontier of Hsiang-lin in Jih-nan.
>
> « South of Huang-chih is the country called I-ch'eng-pu where the Han interpreter envoys started their return voyage » (26).

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(26) Luce (1925: 99) gives ancient pronunciations after Karlgren's reconstructions as: *Tu-yüan*, tuo-ngy(w)an; *I-lu-mo*, iəp-luo-muət; *Shen-li*, ziəm-lyie; *Fu-kan-tu-lu*, b'iu-kâm-tuo-luo; *Huang-chih*, g(w)âng-chie; *P'i-tsung*, b'yie-tsuong; *I*(*Ssŭ or Chi*)-*ch'eng-pu*, i(zi *or* kyi)-d'iăng-piəu.

In seeking to identify Huang-chih, the significant details in the itinerary need to be highlighted: the period of about twelve months to voyage from the coastal ports opposite Hainan Island to Huang-chih; the ten days of overland travel between Shen-li and Fu-kan-tu-lu; the two months by boat between Fu-kan-tu-lu and Huang-chih, presumably across the sea, but alternatively along inland streams.

The year of voyaging implies sailing close to the shore of Asia, with no venturing out across the great oceans at any point. We know from the famous sea itinerary of Chia Tan, preserved in the *Hsin T'ang shu*, that in the T'ang era ships saved much time by setting forth on the wings of the monsoon from the southernmost tip of the Indo-China mainland direct to the Singapore Strait, taking about one week, and, after negotiating the Malacca Strait with its natural and human dangers of rocks and robbers, they would sail with good speed right over the Indian Ocean from Sumatra and the Nicobar Islands to Ceylon and South India (27).

This was clearly the case in the 8th century, but the meagre evidence we have with regard to the movements of shipping in Eastern waters during the early centuries of the Christian Era seems to indicate that it was customary to hug the coast. Certainly, we can imagine that Austronesian (Malayo-Polynesian) seafarers were fearlessly braving the deeps of the Indian and Pacific Oceans in outrigger boats at that time, but the *Liang shu* (Ch. 54) declares with reference to this period that « the Immense Sea [Chang-hai; the Gulf of Siam] is of great extent and ocean-going junks have not yet crossed it direct » (28). This statement occurs in an account of the country Tun-sun, situated in what is now Thailand, at the top of the Malay Peninsula. In this favoured position it was able to have communication on its western side with India (T'ien-chu) and Parthia (An-hsi), while to its eastern harbour it welcomed ships from Tongking (Chiao-chou).

In the light of this evidence it seems reasonable enough to support the attractive hypothesis that the ten-day march on the Huang-chih route from Shen-li to Fu-kan-tu-lu went across the neck of the Malay Peninsula (29). Of the numerous possible tracks we may mention the Three Pagodas Pass to Moulmein, the Three Chedis Pass to Tavoy, and the Tenasserim River route to Mergui, which was much used in later times by travellers from the West (30). If we accept this short cut, however, we are at a loss to explain why the trip round the coast of Indo-China took ten months. We could perhaps argue that the envoys sat cooling their heels for six months in some intermediate port, waiting for the monsoon wind to change direction, but this idea does not seem to fit into the first three stages of the itinerary, namely five months from China to Tu-yüan, four months to I-lu-mo, and twenty days to Shen-li.

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(27) Pelliot 1904; Wolters 1967: 187-192.

(28) Pelliot 1903: 263; Wheatley 1961: 16; Wolters 1967: 34.

(29) Wheatley 1961: 10; Wang Gung-wu 1958: 22. Hennig 1944: 328, says that this idea goes back to G. Coedès in *Journal of the Siam Society* 1928, 207.

(30) Wheatley thinks that the Tenasserim River route would be too short for the ten days overland journey of the Han envoys. Yet a party of 17th-century Persian envoys to Siam took twenty days to negotiate the Tenasserim River by boat from Mergui to a village

Accordingly it seems better to imagine the Han officials following the coast of Asia all the way to the Indian Ocean, passing through the Straits of Singapore and Malacca into the Gulf of Martaban. In this case we should possibly look for I-lu-mo, Shen-li, and Fu-kan-tu-lu in Burma (31). Tu-yüan, situated half-way between China and Shen-li, would lie somewhere around the middle of the eastern side of the Malay Peninsula. Huang-chih, at two months' distance by sea from Fu-kan-tu-lu would thus be located on the east coast of the Indian sub-continent. However, Paul Pelliot (whose opinions must always be given very serious consideration) thought that one or more of these places might be found on the western side of India (32).

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named Jalang, and then fifteen days on elephant-back to the Menam River. See *The Ship of Sulaimān*, translated from the Persian by John O'Kane, New York, 1972, 49-50.

(31) Luce (1925) explores this possibility in discussing Ferrand's suggestion that Fu-kan-tu-lu (B'iu kâm tuo luo) was Pagan in the centre of Burma on the Irrawaddy River; but, says Luce, as Pagan was not founded until many centuries later, Old Pagan (Tagaung, further upstream) would have to be invoked; Luce goes on to reject this as being too far inland to suit Fu-kan-tu-lu. However, it is conceivable that part of the two months by boat from Fu-kan-tu-lu to Huang-chih could have been spent travelling down the very navigable Irrawaddy River. This is certainly the view of Fujita Toyohachi (1943), who locates Tu-yüan on the northern coast of Sumatra, I-lu-mo at the mouth of the Salween River in the Mon (Rmen) region of Burma, Shen-li at Sillah near Pagan, Fu-kan-tu-lu at Tagaung, and Huang-chih at Kāñcī.

It is striking that Mon Burma was in later centuries in contact with Kāñcī and Ceylon for Buddhist purposes, and the conquests of King Anawrahta of Pagan (11th century) in southern Burma also include places that bear some resemblance to the objects of our search: Śrikshetra (Prome) and Shen-li; Pokkharāvatī and Fu-kan-tu-lu; Rammanagara and I-lu-mo; and if Fu-kan-tu-lu is in fact two place-names (a kingdom of Tu-lu being attested in the Chinese texts, see Wheatley 1961: 8), then Fu-kan could be Pokkharā (vatī) and Tu-lu could be Dalla, both side by side at Rangoon; on these two places in Burmese traditions see B.R. Pearn, *A History of Rangoon*, Rangoon, 1939, 1-15. Alternatively the route by land from Śrikshetra through the mountains to the port of Sandoway (Dvāravatī, Tu-lu?) could be suggested for the ten-day walk from Shen-li to Fu-kan-tu-lu. The P'i-tsung of the return voyage is reminiscent of Ptolemy's Besunga (located on the Gulf of Martaban); but this is impossible unless we invert the two stages, 2 months and 8 months.

(32) The possible identifications are perhaps endless, but I-lu-mo could be understood as Ceylon; the initial *i* is reminiscent of Tamil treatment of foreign names beginning with *l* (cf. *Ilāmuri* for Lambry in northern Sumatra in the Tanjore inscription of the 11th century; Wheatley 1961: 201); the ancient Tamil name for Ceylon was *Iilam*. Then again the name *Siṁhala* (Ceylon) bears a resemblance to Shen-li (the *n* of *shen* being an *m*, apparently,

Perhaps another itinerary can aid us here, one noted down by K'ang T'ai, a 3rd-century envoy of the Wu Dynasty (222-280). Recounting the things he had learned in Fu-nan, the ancient kingdom on the Mekong River, K'ang T'ai tells of an embassy sent by the ruler of Fu-nan to India (33). K'ang T'ai's report on Fu-nan is now lost, but fragments are preserved in quotation in other writings. Thus in the *Liang shu* (Ch. 54) we find information provided by K'ang T'ai:

> « In the time of the Wu Dynasty Fan Chan, the King of Fu-nan, sent one of his relatives, Su-wu, on an embassy to this kingdom [T'ien-chu, India]. From Fu-nan he went to the port of Chü-li. He then followed the sea to a great bay. Directly to the north-west he entered and passed through the bay [*or* several bays], on the shores of which were several kingdoms. In more than a year he reached the mouth of the River of India. He then sailed up the river for 7,000 li to reach his destination » (34).

The *Shui Ching Chu* gives the same information in the following form, adding the name of the river:

> « The *Fu-nan chuan* of K'ang T'ai says that to the south-west of Chia-na-t'iao one enters a great bay, about 700 or 800 li [away? long?], and then one reaches the great estuary of the Chih-hui-li river. Crossing the river and proceeding westward one arrives at Ta-ch'in [the Roman Empire].

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in Han times). Alternatively, Ptolemy's *Simulla* (Chaul) on the west coast of India could be connected with Shen-li; in which case his Pakidarē, further north, could be Fu-kan-tu-lu, and the two month's voyage to Huang-chih could be done by boat up the Indus and then down the Ganges, or else by ship right round the coast of India. Yet another conceivable line is to take Fu-kan-tu-lu as the Indian Pokkharāvatī (Puṣkalāvatī, modern Charsadda) known in Buddhist legend and situated near Taxila (Tu-lu?) in the far central north of ancient India; the voyage to Huang-chih would then be by the river trade routes to the great cities of the Ganges Valley. I trust that the reader will pardon this plethora of hypotheses, especially as not one of them has the ring of certainty. I hope however, that the analogy of K'ang T'ai's itinerary, a comparison which is made for the first time in the following paragraph, will bring new light onto the subject. For early Chinese texts concerning Ceylon, see Petech 1954.

(33) For the controversy over the location of Fu-nan on the Mekong River rather than on the Menam River in Siam, see Colless 1973.

(34) Wheatley 1961: 24; Pelliot 1903: 271 and 277-278. This embassy was occasioned by the visit of a merchant whose name is given in Chinese transcription as *Chia-hsiang-li*. His homeland was *T'an-yang*, which is usually assumed by scholars to have been to the west of India; perhaps he was an Iranian from *Damghan*, a city lying south of the Caspian Sea and west of Hekatompylos, on the trade route to Ecbatana. On the other hand it is conceivable that he actually hailed from South-East Asia. Whatever his origins, he reported on the wonders of India to the King of Fu-nan and stimulated him to send envoys there.

> « It also states that on leaving the port of Chü-li one enters a great bay. Going directly north-westwards in more than a year one reaches the mouth of the River of India, that is, the mouth of the Heng-shui-chiang » (35).

It took about a year, then, for the ambassador of Fu-nan to travel by sea from the mouth of the South-East Asian Mother Gaṅgā (the Mekong) to the Indian Gaṅgā (the Ganges), here called the Heng-shui river. This is comparable to the time taken for the Han envoys to reach Huang-chih, a total of over twelve months, with about ten (or sixteen) months for their return voyage. The first port of call named in the Han itinerary was Tu-yüan (after five months), while for the Fu-nan ambassador it was Chü-li. We reasoned above that Tu-yüan might have been situated on the east side of the Malay Peninsula; Chü-li definitely lay on this coast, as we know from another early itinerary between India and China, via Fu-nan (36).

The Han envoys, we are told, were transported in barbarian ships and we could thus postulate that they followed the same sea route as the Fu-nan ambassador to India. His "great bay" might have been the Bay of Bengal and the kingdoms he encountered on its shores may have included the I-lu-mo, Shen-li, and Fu-kan-tu-lu visited by the Chinese voyagers a few centuries previously.

In any case, it seems a reasonable hypothesis to equate the two names Huang-chih and Heng(-shui), standing at the terminus of each itinerary, and recognize Gaṅgā as the basis of each transcription (37). At the same time, K'ang

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(35) Petech 1950: 53. The location of Chia-na-t'iao is discussed by Wolters 1967: 43-44, 59-60, 272, n. 73. Wolters equates K'ang T'ai's Chia-na-t'iao with Wan Chen's Ku-nu and tentatively connects them with Ptolemy's Kanthi (seemingly situated in the vicinity of modern Karachi); he cites a suggestion of B.N. Mukherjee that Kanthi corresponds to the harbour in the Gulf of Cutch known today as Kanthaka.

(36) Wheatley 1961: 23-25; Wolters 1967: 47. Both scholars think that Chü-li had ports on both sides of the Malay Peninsula; this is possible, but not probable in this context, in view of the itinerary presented by Wolters, 255-257 (though he would say that this is not a true itinerary, but is concocted from Chinese geographical accounts of South-East Asia). In any case the port of Chü-li was said to be on the Gulf of Siam (Chang-hai) and was therefore not Takkola (Takuapa on the western coast) as so many have wrongly asserted in the past, reading T'ou-chü-li (Pelliot 1903: 271, T'eou-kiu-li) instead of "going to Chü-li" (Wheatley 1961: 24). Anthony Christie (*R.C. Majumdar Felicitation Volume*, ed. by H.B. Sarkar, Calcutta, 1970, 3-4) still pictures the Fu-nan ambassador embarking at Takkola, and then following the curve of the Bay of Bengal right round to Cape Comorin then up the west coast of India, probably to the Indus River.

(37) The old sounds for Huang-chih were g'wâng-ťyĕg/γwâng-tśię (Bagchi 1957: 772, gives an alternative form g'jie). Heng-shui was g'əng-śiwər, γəng-świ. Cf. the Ming texts where the Ganges is Heng-ho (γəng-γâ). In the later two cases the same character is used for Heng; and in the *Shui ching chu* (Petech 1950: 23) it occurs in the combination Heng-chia (γəng-ka). Notice that in Huang-chih the character Huang is the same as that in Huang-ho, the great "Yellow River" of China.

T'ai is known to have confused the rivers of India in his own mind, as can be seen from the passage cited above in which the great estuary of the river Chih-hu-li is located on the westward sea route from India and thus appears to be the Indus; and yet elsewhere K'ang T'ai is found identifying the rivers Chih-hu-li and Heng (Ganges) (38). Nevertheless, he seems to have meant the Ganges in his itinerary from Fu-nan to the Heng-shui-chiang (G'eng-water-river), for he adds:

> « At the mouth of the river there is a kingdom called Tan-mei, which belongs to India and whose ruler sent letters to the Huang-men [Yellow Gate, the Chinese Court] and was appointed king of Tan-mei » (39).

The kingdom of Tan-mei is clearly Tāmralipti, the famous ancient port in the Ganges Delta. It is interesting to note this otherwise unrecorded contact between an Indian ruler and the Emperor of China, (here the Wu Dynasty of Nanking).

Unfortunately this does not help us to decide precisely which kingdom of India the Han envoys visited when they came to Huang-chih. Magadha, Aśoka's realm on the Ganges, would appear to be a likely choice; but by Han Wu-ti's time (141-87 B.C.) the Mauryan Empire had fallen and foreign invaders were interfering in northern India. This is a very obscure period in India's history and we are also unable to tell who the king of Huang-chih was who supplied Wang Mang with a live rhinoceros at the commencement of the Christian Era. The Han envoys are said to have set out on their homeward voyage from a kingdom called I-ch'eng-pu, which lay south of Huang-chih. Scholars who place Huang-chih at Kāñcī locate I-ch'eng-pu further down the coast of south-eastern India or else on Ceylon (40). However, if Huang-chih was in fact the Ganges Valley, or more particularly a kingdom such as Magadha and its capital Pāṭaliputra (Patna), then I-ch'eng-pu might be Campā further downstream. Campā is named in Buddhist literature as a place where merchants assembled to make the voyage to eastern ports (41). Then again, if the reading Chi-ch'eng-pu is accepted, the name Kajaṅgala becomes a possibility, being one of the main trade stations on the route from Pāṭaliputra and Campā to Tāmralipti (42). In a T'ang overland itinerary from China through Assam, Kajaṅgala apparently appears as Chieh-chu-wu-lo (43).

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(38) Petech (1950: 24) argues that the Chih-hu-li is in fact neither the Indus nor the Ganges but the Phalgumatī (Pali Vaggumudā, the modern Rapti), correcting Chih-hu-li to Pa-hu-li (b'at-yuo-liei) in accordance with the reading in the *Kua ti chih* (642 A.D.).

(39) Petech (1950: 53-55) assumes that this embassy from Tāmralipti (modern Tamluk) to China was in the time of K'ang T'ai and the southern Wu Dynasty (222-280) of Nanking; but, he adds, no such embassy is registered in the annals (*pen-chi*) of the Wu in the *San kuo chih*.

(40) E.g. Yü 1967: 172-174.

(41) There is an interesting analogy in the *Hsin T'ang shu* (222; see Pelliot 1904: 359) for « I-ch'eng-pu south of Huang-chih » in « Ching-chia (Gaṅgā) to the north of Chan-po (Campā) ».

The 3rd-century ambassador from Fu-nan is said to have travelled 7,000 *li* up the Ganges to meet "the King of India". This ruler is usually thought to have belonged to the Muruṇḍas, a branch of the Śakas who occupied Magadha. However, taking the Han *li* as equivalent to about one quarter of a mile or 400 metres, this distance of 7,000 *li* leads a long way past Pāṭaliputra, and indeed right into the Panjāb. The King is reported as presenting four Yüeh-chih (Indo-Scythian) horses to the ambassador, and these were perhaps more readily procurable in north-western India than in the river ports of the Ganges. Moreover, the names T'ien-chu and Shen-tu refer primarily to the region of the Indus Valley (44). Whatever the solution to the problem may be, the fact is that ancient India was covered by a vast network of trade routes along highways and rivers; and the Han envoys, like the Fu-nan embassy, could have been granted royal passports to traverse the whole land.

Consideration should now be given to the descriptions of India found in the *Hou Han shu* ('History of the Later Han', composed in the 5th century) and the *Wei lüeh* ('Summary of the Wei', compiled in the 3rd century and now lost except for quoted fragments). A complete translation of the section on India in the *Hou Han shu* (Ch. 118) (45) will be given here.

> « The country of T'ien-chu is also called Shen-tu. It lies several thousand li southeast of the Yüeh-chih; its customs are similar to those of the Yüeh-chih, but the land is low, humid, and hot (46). This kingdom is on the banks of a great river [the Indus]. The inhabitants ride on elephants in warfare; they are weaker than the Yüeh-chih; they practise the way of the Buddha, and it has become customary not to kill or fight.
>
> « If one goes south-westwards from the Yüeh-chih country of Kao-fu [Kābul] one reaches the Western Sea, while eastwards one reaches the country of Pan-ch'i. All this constitutes the territory of Shen-tu.
>
> « Shen-tu has hundreds of separate walled cities, each with an ap-

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(42) Srivastava 1968: 80.

(43) Pelliot 1904: 181.

(44) But Sylvain Lévi, followed by Bagchi (1957: 772 and 774), says that the Muruṇḍas (a branch of the Śakas) had settled in Magadha, and it was their king who would have received the embassy from Fu-nan.

(45) Translation after Zürcher (1968: 368) and Chavannes (1907: 192-194).

(46) In this sentence Chavannes has Hsiung-nu instead of Yüeh-chih.

pointed governor, and scores of separate kingdoms, each having its own ruler. Although these kingdoms are somewhat different from one another, they are nonetheless all called Shen-tu. At this time [early in the 2nd century A.D.] they are all subject to the Yüeh-chih, who killed their king and installed a general as ruler over this population.

« This country produces elephants, rhinoceroses, tortoise shell, gold, silver, copper, iron, lead, and tin. On the western side it is in communication with Ta-ts'in [the Roman Empire], and so the precious products of Ta-ts'in are found there. Also available are fine cloths, woollen carpets of good quality, perfumes of all kinds, crystallized sugar, pepper, ginger, and coarse salt.

« In the time of Emperor Ho [89-105 A.D.] they sent several embassies to offer tribute. Subsequently, the Western Regions having revolted, these relations were cut off. Then, in the reign of Emperor Huan, in the second and fourth yen-hsi years [159 and 161 A.D.], they came from beyond Jih-nan bearing offerings.

« There is a tradition that Emperor Ming [58-75 A.D.] saw in a dream a golden man of tall stature who was crowned with a bright light; he questioned his ministers, and some of them told him that in the Western Regions there was a god called Fo [the Buddha] who was seven feet tall and had the colour of yellow gold. So the Emperor sent an embassy to T'ien-chu to inquire about the teaching of the Buddha. It was then that images began to be fashioned in the Middle Kingdom. King Ying of Ch'ou was first to accept this doctrine, and so there were in the Middle Kingdom some people who practised this religion. Later, Emperor Huan [147-167 A.D.] gave himself up to divine matters and often made sacrifices to the Buddha and to Lao-tse; and the people gradually began to practise this religion, which subsequently thrived greatly.

« The kingdom of Tung-li [*or* Chü-li, according to the *Wei lüeh*] has for its capital the walled city of Sha-ch'i. It lies more than 3,000 li southeast of T'ien-chu and is a large country having climate and products similar to those of T'ien-chu. There are several dozens of separate walled cities, the rulers of which style themselves kings. The Great Yüeh-chih attacked them and brought them under subjection. The men and women are all eight feet tall, but they are faint-hearted and weak. Mounted on elephants or on camels they go in and out of the neighbouring kingdoms. When they are attacked they mount elephants to fight ».

To this account the *Wei-lüeh* adds that *Chü-li* is also named *Li-wei-t'o* or *P'ei-li* (*-wang*). It also says something about a kingdom *P'an-yüeh*, which seems to be the same as the *P'an-ch'i* of the *Hou Han shu*.

> « The kingdom of P'an-yüeh is also called Han-yüeh-wang; it lies several thousand li to the south-east of T'ien-chu; it is near I-pu. The inhabitants are small, having the same stature as the Chinese. Chia Ssŭ, a man from the land of Shu [Szechwan], went there. Thus ends the south route, which, after having reached its furthest point in the west comes back towards the south-east » (47).

An attempt must be made to identify the places in these texts. *Shen-tu* (śien-d'ôk, śien-d'uok) is straightforward: it represents Sindhu (the Indus), and the same probably applies to *T'ien-chu* (t'ien-tôk, t'ien-tuok). If these equations are accepted they provide us with proof that Han transcriptions of foreign names were by no means accurate, and this makes our task more difficult by opening the gates to unbridled subjectivism in offering identifications for other names in these extracts.

Nevertheless *Chü-li* (kyo-lia, kywo ljie) and its royal city *Sha-ch'i* (sa-gia, ṣa-g'jie) might well be the kingdom of *Kośala* and its second capital *Sāketa* (Ayodhyā). The two other names added to this kingdom may represent other great cities of the Ganges Valley. Two illustrious walled towns of this region, which had both been capitals of Magadha, were firstly Bimbisāra's Rājagṛha (in the lifetime of the Buddha, 6th century B.C.) and secondly Aśoka's Pāṭaliputra (3rd century B.C.). *Rājagṛha* goes well with the Han pronunciation of *Li-wei-t'o,* liər-dywər-d'ək (T'ang: liei-ywi-d'ək). In other early Chinese texts reproduced in the *Shui-ching-chu* Rājagṛha appears as *Wang-she* (ᶜRoyal residenceᵓ) and as *Lo-yüeh-chih* (48). Further, *P'ei-li(-wang)* in the *Wei lüeh* is suitable for *Pāṭali(putra)* since the Han sound for P'ei is p'wâd, and in the quotations in the *Shui-ching-chu* Pāṭaliputra emerges as *Po-li-yüeh* (puâ-liei-jywat) and *Pa-lien-fu* (pa-lyän-pyuət) (49).

As for *P'an-ch'i* (b'wân-k'yəg, b'uân-k'ji), or, as it appears in the *Wei lüeh, P'an-yüeh* (b'wân-gywât, b'wân-jywat) with another form *Han-yüeh* (xán-gywât, xân-jywat), the ancient region in Bengal that is named in Indian texts as *Vaṅga* seems to be in evidence here (50). P'an-ch'i lay to the south-east of Kao-fu (Kābul in present-day Afghanistan); and if one came to the Western Sea to the southwest of Kao-fu, it is possibly implied that Pan-ch'i was on the sea to the southeast, in the Ganges Delta. Moreover, the *Wei-lüeh* places it at the westernmost end of the southern route from China, which seems to say that this is the road to India that Chang Ch'ien desired to take in the early days of Han expansion (51).

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(47) Translations after Zürcher (1968: 371) and Chavannes (1905: 551-552). Chavannes suggests Assam or Burma for P'an-yüeh. He alters I-pu to "Yi-kiun", "la commanderie de Yi" of the Han era, having its centre east of the secondary prefecture of P'ou-ning (prefecture and province of Yunnan). P'an-yüeh is perhaps to be compared with the Tien-yüeh that Chang Ch'ien heard about in his mission for Han Wu-ti; it was likewise visited by people from Shu (Szechwan).

(48) Petech 1950: 28, 37, 47.

(49) Petech 1950: 33-34, 42.

(50) See n. 22 above. Vaṅga is also one of the places in the list of Bhima's conquests, alongside such names as Puṇḍra and Tāmralipti; see the appendix on this subject in Srivastava 1968.

In conclusion it may be said that the Han Chinese were apparently better informed about India than the Indians were about China, although it is possible that many ancient Indian books mentioning China have been lost along with all the royal records of the Indian empires; and Chinese knowledge of South Asia was largely mere hearsay. To be sure, China despatched soldiers and explorers into the centre of Asia in search of a safe passage to the land of the Indus and the Ganges, but at the same time India was sending out Indo-Iranian merchants to bring home the material treasures of China, and Buddhist missionaries to hand over the traditions of the Holy Land where the sacred feet of the Buddha had trod (52). Such mystic pearls, as well as solid jewels, were gladly received by the people of Han (53). In return they gave freely of their silk, though they guarded its secrets closely. Nor did they see fit to make proselytes to their religion abroad; rather, Confucian policy was to display Chinese virtue (*te*) in order to attract barbarians, who would come dutifully bearing their tribute to the Central Kingdom and thereby increase yet further the prestige of Han civilization. This was certainly Wang Mang's strategy in the closing years of the Former Han Dynasty, even before he had achieved (or usurped) full imperial power, and it won him among other things a live rhinoceros from India for his royal park, to excite the admiration of foreign visitors to the capital city (54).

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(51) Cf. n. 47 above.

(52) Harmatta (1970) argues that silk goods were brought from China mainly by Iranian and Indian merchants, because the piece of silk roll from Yü-men Kuan, west of Tun-huang, bore a Brāhmī inscription in Prākrit. He reads the inscription as *a[ki]sṭasya paṭa giṣti ṣapariśa* and translates it « curtain silk roll: 46 spans ». *Paṭa* is to be compared with Sanskrit *paṭṭa* ('textile material strip'), which is used in Prākrit especially for silk. Cf. *Cīna-paṭṭa* in the *Arthaśāstra*, as mentioned in Part I above, a comparison that Harmatta does not draw. Harmatta dates the silk inscription before 34 B.C., it should be noted.

(53) Bagchi (1957: 766) sees early Buddhist influence in China by postulating that the "Taoist philosopher" Huai-nan-tzŭ, who died in 122 B.C., knew Jātaka tales and reproduced the Buddhist cosmology of nine regions round a heavenly mountain (Mount Meru, identified by him with the K'un lun mountain of Chinese lore).

(54) For a detailed study of Wang Mang's relations with Huang-chih, see Velgus 1974: 54-63.

ADDENDUM

1. *The Rhinoceros of Huang-chih*

Dr Igor de Rachewiltz has kindly pointed out to me the important note by Berthold Laufer, in *Chinese Clay Figures, Part I*, (Field Museum of Natural History, Publication 177), Chicago, 1914, 80-81. Laufer states that the rhinoceros is easily tamed and has often been transported over vast tracts of water and land. Examples of this animal being offered as tribute to China are cited by him:

- — 1009: Chiao-chih, Tongking, (*Sung shih*, Ch. 489);
- — 796: a tame rhinoceros was received and housed in the Shang-lin palace, but died in the cold winter of the following year; it was celebrated in verse by the poets Yüan Chen and Po Chü-i;
- — 819: Ho-ling, Java (*Chiu T'ang shu*, Ch. 197, 2b);
- — 539: Fu-nan, Cambodia (*Liang shu*, Ch. 54, 4);
- — in the time of the Emperor Ling (168-188) of the Later Han Dynasty, Chiu-chen in Tongking (*Huan yü chi* and *Ta Ming i t'ung chi*, edn. of 1461, Ch. 90, f. 5, where it is also said that Vietnam presented a rhinoceros in the time of the Yüan Dynasty, 1260-1367);
- — 84: the Man-i beyond the boundary of Jih-nan presented a live rhinoceros and a white pheasant (*Hou Han shu*, Ch. 116, 3b);
- — 94: the tribes living south-west of Szechwan sent a rhinoceros and an elephant (*Hou Han shu*, Ch. 116, 8b);
- — 2: Huang-chih (*Ch'ien Han shu*, Ch. 27B, 17b).

Laufer discounts the theory of Herrmann (1913) that Huang-chih was Aghāzī in Abyssinia, and argues instead for a location on the Malay Peninsula, since Huang-chih lay south of Jih-nan (Tongking) and 30,000 *li* distant from the capital of China, Ch'ang-an (*Hou Han shu*, Ch. 116, 3a). Laufer has to dismiss the 30,000 *li*, which would take us across the Indian Ocean, as being an inaccurate sea measurement; but it could also be said that the direction "south of Jih-nan" only indicates the initial bearing for the voyage and does not exclude a subsequent change of direction to the north in order to negotiate the Malacca Strait and the Bay of Bengal. It is true that the list of countries that presented a rhinoceros as tribute only covers South-East Asia, but Laufer himself states that the Rajas of India formerly kept rhinoceroses in captivity. We know that transportation facilities were available to ship horses from western India to Chia-ying (on the Malay Peninsula) in the 3rd century A.D., as reported by K'ang T'ai (see Wolters 1967: 59), so why not rhinoceroses from India to China?

But why would the Chinese Court desire a rhinoceros from India when this animal could be readily obtained close to home? The answer is surely that the distant origin of the Indian rhinoceros made it exotic and hence very desirable.

2. *The Identification of Huang-chih*

The present writer has given preference to the opinion of P.C. Bagchi (1957: 772) that Huang-chih (ɣwang-tsie *or* g'jie) represents the name Gaṅgā, the Ganges. It is worth noting also the suggestions that Bagchi makes for other places in the Huang-chih itineraries:

- — Tu-yüan (tuo-ngywan) is equated with Taṅgana, but he does not explain this name, unless it is the Ṭaṇkaṇa that appears in the *Rāmāyaṇa* (Bagchi 1957: 764);
- — I-lu-mo (iep-luo-muet) he connects with Ilavar-dhana (Elavadhana in the *Niddesa* list of places overseas; cf. n. 22 above);
- — Shen-li (understood as Diem-li) he identifies with Tamāla (cf. Ptolemy's Temāla on the south-western point of Burma, and the Tamali of the list in the *Niddesa*);
- — Fu-kan-tu-lu (b'iu-kam-tuo-luo) here he can only suggest "Pugam-(?)";
- — P'i-tsung (b'yie-tsuong) he takes to be the Vesuṅga of the *Niddesa* list (Ptolemy's Bēsunga);
- — Ho-P'u (ɣap-bu, the Chinese port near Hainan Island) he equates with Gambu (or Gumba) in the *Niddesa* list, and this is a very attractive idea.

3. *The Identification of Shen-tu.*

After having worked out a set of identifications for the toponyms in the Chinese accounts of Shen-tu (in the *Hou Han shu* and the *Wei lüeh*) I discovered that an earlier attempt had been made by Shiratori Kurakichi, « Chinese Ideas Reflected in the Ta-ch'in Accounts », *Memoirs of the Research Department of the Toyo Bunko,* 15, 1956, (25-72), 38-43, in the context of a discussion on the tall stature attributed to the inhabitants of Ta-ch'in and likewise those of Chü-li (in India).

Chü-li (kyo-lia) he equates with Kosala (or Kośala), and here we are both in agreement. As he points out, Chü-li was 3,000 *li* south-east of T'ien-chu proper (the Indus Basin) and must have lain in the valley of the Gaṅgā.

Sha-ch'i, the capital, would be Sāketa (Ayodhyā), he says, and again I agree. He adds that Fa-Hsien's *Fo-kuo chi* has Sāketa as Sha-chih-to, and this is a good analogy.

Li-wei-t'o (liər-dywər-d'ək), said to be another name for Chü-li, he takes to be Śrāvasti and states that the *Sutta-nipata* and other authorities aver that this was an alternative name for Kosala. He notes its appearance in Hsüan-Chuang's *Hsi yü chi* as *Shih-lo-fa-shih-ti.* This is a good suggestion, involving the omission of the two sibilants in the older transcription. His case seems stronger than mine, namely the city Rājagṛha.

P'ei-li-wang, the second alternative name for Chü-li, is made to yield Śrāvasti again by amending *P'ei* to read *Tsa* but this solution seems forced. Pāṭaliputra is a better suggestion, in my view, and if P'ei-li-wang is not Śrāvasti then it is possible that we are not obliged to see this name in Li-wei-t'o either.

P'an-ch'i and its alternatives *Pan-yüeh* and *Han-yüeh* are identified by Shiratori Kurakichi as *Gangē*, the Ganges Delta port named in the *Periplus of the Erythraean Sea* (see above at n. 21). To achieve this he reduces all three transcriptions to a hypothetical original Han-ch'i, although he adds that P'an-ch'i was perhaps "a contracted transcription of Bangala". This in fact brings him very close to my suggestion, *Vaṅga*, the name of an ancient region in Bengal.

Finally he reminds us that the names *Shen-tu* and *T'ien-chu* stood for the basin of the Indus, especially the Panjāb, but could also be applied to the whole area from the Indus to the Ganges (as when P'an-ch'i, in Bengal, is included in Shen-tu with its hundreds of cities). However, he does not bring Huang-chih into his argument, even though Huang-chih resembles his Han-ch'i and, in my view, both are to be connected in some way with the Ganges region.

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ALBERTO GIUGANINO

1897-1979

I first became acquainted with Dr Alberto Giuganino soon after the second world war. At one of the first lectures on China that I attended at IsMEO, Alberto Giuganino was speaking on Chinese painting, but with constant references to the poetry of the T'ang dynasty. I had just begun to study the Chinese language, and listening to him I was encouraged to continue in my quest to understand Chinese civilization. To speak of him now is no easy task as there is a risk of drawing an incomplete portrait, whereas Alberto Giuganino was a man who had completely fulfilled himself. Secretary general of the Chamber of Deputies, he had accepted the position of Vice-President of IsMEO not only on account of his long-standing friendship with Giuseppe Tucci who, in the dedication of one of his books had called him "more than a friend, a brother", but also to be able to make a twofold contribution to the Institute he cared so much for, by obtaining the financial support that IsMEO needed and, with his constant presence, by pursuing his studies in Chinese art.

I shall not attempt to give here a bibliography of his writings but one cannot help mentioning his monumental work *La pittura cinese* that was published by the Libreria dello Stato in 1959 — a pioneering work in this field in Italy, which is still a valid reference point even now. His fondness for scientific research did not make him neglect the task of making Chinese art known in Italy: suffice it to mention, of the many exhibitions he organized at IsMEO, the one on Ming and Ch'ing painters held in 1950, and the one on modern Chinese painting held in 1958.

In 1957 he led the cultural mission of IsMEO to China, together with Admiral Mariano Imperiali, Prof. Martin Benedikter and myself. At that time there were no diplomatic relations between China and Italy, but he was capable of leading the mission with great common sense so as to lay the foundation for future cooperation between IsMEO and the cultural institutions of the People's Republic of China.

A distinguished humanist, he was fond of using Latin for writing letters or dedications to his friends. He was a collector of works of art, but did not disdain small handicrafts that were the product of man's industry. He was a book-lover who admired rare editions but also any book at all which helped to increase his knowledge. He was a translator of Shelley's works, who delighted in writing verses himself that he often presented to his friends as though they were translations — the modesty of an artist who is unwilling to be judged. But all this does little to commemorate him if one does not recall his immense humaneness and his willingness to place himself at the disposal of whosoever asked it of him. *Vale, amice Alberte; tui memini, nec tamen sodalitatis tuae licet oblivisci.*

LIONELLO LANCIOTTI

MASSIMO SCALIGERO
1906-1980

Massimo Scaligero was born at Veroli and died in Rome at the age of 74 years. He was responsible editor of *East and West* as well as being secretary of the editorial staff, from 1954 when he was appointed to that position by Giuseppe Tucci, President of IsMEO and chief editor of the journal, until 1978 when he retired, although in later years poor health had compelled him to play a less active part and to restrict his visits to IsMEO.

After an education in classical and philosophical studies Scaligero began work as a journalist, writing for various magazines and newspapers, including *Il giornale d'Italia.* But from the beginning his true vocation was philosophical research, which he carried out with keenness and fervour. Very early on he became acquainted with Eastern, and especially Indian, thought — an acquaintance which turned out to be extremely fruitful. His interest focused on Yoga, Tantrism, Mahāyāna and Vajrayāna Buddhism, Zen, and the Upaniṣads with the classical schools of Vedanta and the modern trends led by Vivekananda and Aurobindo, up till Krishnamurti. All this helped to give a new turn to his way of thinking. His works — *Avvento dell'uomo interiore, Trattato del pensiero vivente, Lotta di classe e karma, Yoga, meditazione, magia,* to mention only a few of them — point out with great perspicacity the meeting-points between the two different philosophical experiences of East and West, and they mark the stages and the results of his research which reached its climax in his assertion of "pure thought", which in his view was the basis of the true knowledge of man and of all things, that alone may lead to the solution of the spiritual and moral problems that torment the modern world. In addition to his major works we must also recall the contribution he made, in his field, to the knowledge of Eastern culture and its relations with the West: in *East and West* he wrote articles and hundreds of extensive and accurate reviews of books on Asiatic philosophy and religions, and he also contributed to the cultural section of the monthly bulletin *Bipeninsular*, published by the Italian Consulate General in Bombay.

But we cannot speak of Massimo Scaligero the thinker and scholar without including in these few remarks a brief mention of his richly humane personality. Whoever had the good fortune to know him and to frequent him will not forget his deep feelings of friendship and sympathy, his ascetic figure, always serene and smiling, which clearly mirrored his inner self and which instilled serenity in others too. Nor will they forget the shy and gentle man, firm in his principles and beliefs which made him avoid situations that could lead to compromise, and heedless of material gain. He was a man who had attained spiritual freedom, and who abided by his ideals. His loss will be deeply felt indeed.

ANTONIO GARGANO

Book Reviews

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Shyam Manohar Pandey, *The Hindi Oral Epic Loriki,* p. 191 (R. S. McGregor).

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ARCHAEOLOGY AND FINE ARTS

A. de Lippe, *Indian Mediaeval Sculpture* (Amsterdam, North Holland Publishing Company, 1978, XXVI+411 pp. including 300 black-and-white and 12 coloured illustrations, map).

Although during the 19th and much of the 20th century scholars were studying mediaeval Indian architecture, sculpture of the same period was badly neglected. Interest was mainly focused on early and classical sculpture, especially on that of North India. Only occasionally was some aspect of the later period discussed in an article. However, during the last ten to fifteen years mediaeval Indian sculpture has gradually begun to attract the attention it so fully deserves. Nevertheless, a good survey of the subject was still missing. Dr de Lippe's authoritative and magnificent book now at last fulfils this long-felt need and will undoubtedly remain for many years to come a most significant work on mediaeval Indian sculpture.

In his preface the author informs us that he has concentrated on works of art which are little known and, in addition, on sculptures which are still *in situ*, thus providing the proper aesthetic and religious context. The latter approach inevitably favours South India where much less has been destroyed.

The book is divided into two parts devoted to North and South India respectively. The author rightly points out that in spite of this division on geographical grounds, there is a surprising degree of stylistic coherence between the North and the South as a result of religious unity. Each of the twelve chapters of the book gives a succinct and clear historical survey describing the main events of the various and often confusing periods of mediaeval history.

Part One deals with North India (chapters I-VI) and starts with a few examples of the Late and Post-Gupta periods, continuing with the mediaeval schools of sculpture in Western, Central and Eastern India (pp. 5-130 including 100 plates). Part Two (chapters VII-XII) is devoted to the various schools of South India (pp. 133-388 including 200 plates) and inevitably covers twice as much space as the part dealing with North India.

The author gives an interpretation and short but very accurate description of each sculpture, pointing out its interesting details and its special iconographic or aesthetic importance. The careful and excellent descriptions accompanied by magnificent illustrations make delightful reading. The author expresses himself effortlessly in elegant English and succeeds in conveying the lyrical beauty of the subject. Here, for example, is a passage in which he describes the beautiful female figures on the Nāgeśvara temple at Kumbakonam: « We find here what is perhaps the most perfect realization of that sublimated realism mentioned above. This realism is so much alive that it has been suggested that these could be portraits of Chola princesses and other donors. The bodies are modelled with a gentle softness that is matched by the chaste and demure expression. The long arms, slim waist and heavy breasts express the age-old Indian ideal of superhuman beauty. The anatomy thus is an ideal one, but it still is close enough to nature to carry the spark of life which makes us look over our shoulder in order to see whether any figure has moved » (p. 173).

Almost all the photographs for the superb illustrations were made by the author and his wife. Reducing the plates to 300 must have been a heart-breaking process. On pp. 18-19 there is a reference to Nagda, the illustrations of which seem to have been rejected during the final elimination. We are slightly puzzled by the attribution to the Pallava period of the early 10th-century bronze of Viṣṇu Trivikrama in the Perumal temple at Singanallūr (p. 145). The dating of the sculptures in the Śaiva cave at Malayaḍipaṭṭi (pls. 199-201) to about A.D. 712 is undoubtedly a slip of the pen as their correct date is given on p. 165. We wonder why the animal above the rosary held in the upper left (not right) hand of Śiva Gaṅgādhara in the Śaiva cave at Tiruchirapalli (pl. 142, p. 150) has been interpreted in the past as a deer or a dog as it quite clearly represents the bull Nandi. Moreover, the depicting of *vāhanas* high up on a relief appears to have been common practice in Pallava (cf. pl. 147) and Early Coḷa art (cf. pls. 253-254). The map on p. XXV by no means contains all the sites mentioned or illustrated as the caption suggests. The problem of squeezing in the numerous South Indian sites could have been solved by adding a special map of South India.

The reader is referred to relevant literature in a large number of footnotes and an excellent bibliography is added after the plates, followed by a glossary and index. This scrupulously accurate and highly scholarly book with its superb black-and-white as well as its magnificent coloured illustrations is so well written that it will be enjoyed by both laymen and pundits. It is undoubtedly the best account so far written on mediaeval Indian sculpture.

J. E. van Lohuizen - de Leeuw

Salome Zajadacz-Hastenrath, *Chaukhandigräber. Studien zur Grabkunst in Sind und Baluchistan* (Wiesbaden, Franz Steiner Verlag, 1978; xi-103 pp., X pls., 112 figs., 1 folding map).

Near the mouth of the Indus, in the area around the great centres of Karachi, Thatta and Hyderabad, numerous Islamic cemeteries lie scattered. They consist of tombs of various types — monumental and humble, simple *sémata*, "cenotaphs" and pavilions — most of them characterized by accurate geometrical decoration or figurative work in bas-relief in the pinkish yellow sandstone of which, without exception, they are built. Their customary name derives from the Chaukhandi site near Landhi less than 30 km. east of Karachi directly north of the road to Thatta, a cemetery whose 300-400 funerary monuments can be dated to the years between the 15th and the 18th century, but which was still being used not so many years ago.

Interest in this singular group of monuments sprang up only at the end of last century, and the first item to appear in the relevant bibliography is the description of a number of cemeteries given by J. Ph. Vogel in the *Annual Report* of the Archaeological Survey of India for 1902-3. A quarter of a century later we get what was to remain for a long time the obvious bibliographical reference: the short chapter « Baluch Tombs and Graveyards » in *The Antiquities of Sind*, Calcutta 1929, pp. 164-66 by H. Cousens. Here, the ethnic origin of this type of burial was sanctioned.

Cemeteries of the Chaukhandi type attracted the growing attention of the Archaeological Department of Pakistan, but also, alas, that of unscrupulous collectors. On the one hand, they have of late become the subject of publications for the wider reading public faithfully recorded by Mrs Zajadacz-Hastenrath in large numbers (I would add to them the catalogue of the *Archaeology of Sind* exhibition edited by M. Ishtiaq Khan, Karachi 1975, pp. 35-36, 74-75, figs. 55, 57); and on the other they aroused the scientific interest of a number of scholars. M. A. Ghafur subjected them to further study in *The Calligraphers of Thatta*, Karachi 1968, made full use of by Mrs Zajadacz-Hastenrath, while Khurshid Hasan called in question the ethnic attribution established by Cousens and taken up by others including, once again recently, M. A. Ghafur: cf. Sh. Khurshid Hasan, « Origin of Chaukhandi Tombs », *Journal of the Pakistan Historical Society*, XXIV 2, 1976, pp. 98-107 (for a number of specific questions, see also Id., « Burfati Tombs at Manghopir », in *Proceedings of the Annual Conference of the Pakistan Historical Society, February 1976*, in the press).

Mrs Zajadacz-Hastenrath is not so much concerned to establish whether the tombs of the Chaukhandi type are to be attributed to Baluchi, Rajput or other ethnic groups, as to single out criteria for dating on the basis of stylistic evolution. The latter would seem to be basically autonomous but certainly not independent of the tradition we find established in Gujarat, Rajasthan and more "central" localities of Sind such as Makli Hill. This immense cemetery near Thatta, compared with "rural" graveyards, reveals some interesting variants in the types of tomb they have in common. And it is in fact by tracing the partially divergent lines of development of types of tomb belonging to a central "courtly" environment and those that are peripheral that one may substantiate historically the hints of a religious-ritualistic order afforded by these tombs that are atypical (yet not eccessively so) in an Islamic environment.

The ethnographical aspect of the matter, however, is not one of the interests of the authoress who confines herself to a few somewhat fortuitous indications in note 3 on p. 2. It cannot surely be an accident, in the very zone of Indo-Iranian cultural interchange — from the Hindukush to Sind, from Sistan to Gujarat — that in Islamic sepulchral typology so many singular features remain in common, although only as relicts: tomb/cenotaph above ground, human representations, etc. In this respect, the main job has still to be tackled.

This volume by S. Zajadacz-Hastenrath is, then, a serious starting-point, but also as regards historical-artistic aspects a welcome addition to our knowledge, based as it is on epigraphic evidence and the painstaking study of a wealth of data scrupulously collected and covering above all a period of time stretching from the 15th to the 18th century.

The subject-matter is divided up into three chapters. The first (pp. 1-9) contains a descriptive introduction, the *status quaestionis* and a statement of the aim of the authoress in this work. Chapter II (« Untersuchung der Chaukhandigräber ») is divided into two parts, the first (pp. 10-44) dealing with the chronological question according to typology, and the second (pp. 44-73) discussing some particular questions relating to structure and decoration. Chapter III (pp. 74-76) stresses those aspects of the monuments studied that have wider historical implications. Quite rightly, an emphasis is laid on the divergent development occurring at the beginning of the 16th century when the "cenotaph tombs" (*Kastengrabmäler*) at Makli Hill were replaced by a massive, monolithic type with an almost solely calligraphic decoration; whereas in the rural graveyards the "cenotaph" tombs grow in height, one reason being the placing one upon the other of additional "cenotaphs", and develop a local, traditional type of decoration. That this is to be related to the conquest of Thatta by the Arghuns of Qandahar is more than probable and leads one to postulate the progressive detachment of the capital from the traditional culture of the region.

The volume also contains an excursus (« Zur Grabgestaltung beim islamischen Begräbnis », pp. 77-79) and an accurate list of the cemeteries studied (pp. 80-89): these are fifty in number and for each one the authoress provides a summary of essential data and — where possible — a bibliography (but no less than 32 of them are cemeteries whose existence has been signalled for the first time).

Next come a good summary in English (pp. 93-99) and ten « Ornamenttafeln », where the decorative motifs are distributed according to chronology. The illustrations consist of 48 good plates that are unnumbered (112 figures) and a sketch map of Sind in a scale of 1:1,000,000 showing the position of the fifty sites examined.

Maurizio Taddei

Gulzar Muhammad Khan, *Excavations at Zarif Karuna* (*Pakistan Archaeology*, Number 9, 1973, Karachi 1979).

The author refers to the discovery and excavation (1971) of the graveyard of Zarif Karuna, in the Peshawar plain. During the campaign, carried out by the Department of Archaeology of the Government of Pakistan, 32 graves were excavated and the furnishings of another 12 disturbed graves were salvaged.

According to the stratigraphical evidence, the graves have been reported to three subsequent periods characterized by different burial customs. The complex includes: one grave with a flexed inhumated body, ascribed to Period I; 17 graves with urn burials containing cremated bones, ascribed to Period II; 14 graves with fractional or multiple burials, ascribed to Period III. On the basis of the typological features of the grave furnishings, consisting mostly of vases, the whole complex has been attributed to the "Gandhara Grave Culture".

The discovery — as the author rightly remarks — is of great importance because it shows the presence, in the Peshawar plain, of some cultural traits mostly recorded in the northern hilly area of the North-West Frontier Province. In fact the grave furnishing from Zarif Karuna show some close links with shapes of pottery and with objects common in the protohistorical graves of Swāt and Panjkora valleys (C. Silvi Antonini - G. Stacul, *The Protohistoric Graveyards of Swāt* (*Pakistan*), IsMEO, Rome 1972; A. H. Dani (ed.), Timargarha and Gandhara Grave Culture, *Ancient Pakistan*, III, 1967). In this regard Gulzar properly stresses the wide diffusion, from Swāt and Dir to the Peshawar plain, of some types of vases as the anthropomorphic jars (fig. 8, Pl. XV, Pl. XVI A), the globular and the carinated goblets, as well as a type of female round-shaped figurine (Pl. XVII A). In any case there are some other features which distinguish the grave furnishings from Zarif Karuna, such as the particular shape of the visage-urns (fig. 8/23, Pl. XVI A/1), the occurrence of clay figurines representing the humped-bull (Pl. XVII B, Pl. XVIII A) and the frequent presence of small gold objects (Pl. XX B). Of special interest is a stone "eye-goddess", compared by Gulzar with specimens from Tell Brack in Mesopotamia (Pl. XVIII B, Pl. XIX A).

On the basis of the typological affinities, the whole assemblage from Zarif Karuna may be mostly compared with vases and objects common in the Swāt Valley during Period V (c. 1400/1300 - 800 BC), when flexed inhumation, cremation and fractional burials were contemporarily in use. The occurrence in all the periods of Zarif Karuna of the same very common type of vase (see Table 1), as well as the presence of various types of vases with disk-base (see Pl. XIV) and the absence of iron objects may support this assumption.

Considering the comparatively few graves as yet excavated (only one grave represents Period I), it seems too early as yet to give meaning to the above-mentioned chronological differences of burial custom. In this connection we have also to notice that the graves of Period III which appear on the illustrations (Pls. VII C, VIII D, IX A, XI B), rather than "fractional burials" they seem to give us evidence of disturbed inhumation burials. This suggestion is supported by the occurrence in the Swāt Valley of some cases of fractional burial where the bones have been carefully collected with the skull placed on top according to a well defined ritual (G. Stacul, The Fractional Burial Custom in the Swāt Valley and Some Connected Problems, *EW*, 25, 1975, pp. 323-332).

To sum up, we again stress the great importance of this discovery, which extends up the Kabul River some cultural traits previously recorded in graves and settlements of the northern hilly area. The close affinities between some pottery types from the protohistorical graveyards of the Swāt Valley on one hand and the "soapy red ware" recovered by Sir Mortimer Wheeler in the deepest levels of Chārsada on the other (M. Wheeler, *Chārsada, a Metropolis of the North-West Frontier*, London 1962), suggested to us, years ago, the large diffusion of similar cultural features. The present report on Zarif Karuna, as well as a subsequent very important discovery made by the Department of Archaeology of Pakistan near Taxila, allows us to connect some cultural horizons of the Swāt Valley and other surrounding regions with that of the peoples who lived in the great alluvial plains.

Giorgio Stacul

G. Öney, *Anadolu Selçuklu Mimarisinde Süsleme ve el Sanatları. Architectural Decoration and Minor Arts in Seljuk Anatolia.* Ü. Erginsoy, *Maden Sanatı. Metalwork.* (Ankara, Ajans-Türk Matbaacılık Sanayii, 1978, 224 pp.).

This volume by G. Öney on the architectural decoration and minor arts of the Seljuk period in Anatolia, although bearing the date 1978, has only appeared more recently in bookshops. It is a work that can be looked upon as the culmination of years of research and publications by this well-known scholar who, with rare skill, has been concentrating her investigations on such themes (only the final section of the book, dealing with metalwork, has been entrusted to Ü. Erginsoy).

It is the unfailing practice of the authoress to provide an English summary at the end of the Turkish text, and it is, moreover, clear and precise — qualities not always present in summaries of this sort which are often incomplete and tortuous in expression! There are exact references to monuments and objects that can easily be identified in the figures which are accompanied by bilingual captions. There are no foot-notes and the work ends with a long and exhaustive bibliography which is subdivided into sections following the order in which subjects are dealt with in the text. As regards the section concerned with architectural decoration, books in Turkish have pride of place and quite rightly include numerous works by the authoress herself. An Index of names and subjects completes the volume.

The book consists of eleven chapters following a meaty Introduction (pp. 7-11) full of useful data about the peculiar character of Seljuk art in Anatolia and the main museums and collections, Turkish and non-Turkish, that preserve its products.

Chapter I (pp. 12-29, figs. 1-20) deals with architectural decoration in stone, the use of which marks a fundamental difference compared with the Seljuk art of Iran. The wealth of composition is explained both by the "adaptation" to stone of Iranian decoration in brick and stucco and by the development of all this in decorative features wholly independent in character. Chapter II (pp. 31-58, figs. 21-37) deals with decoration in stone with figurative motifs in relief. Where Islamic art of the early period used human and animal images to decorate palaces and objects intended for restricted élites, Seljuk Anatolia, the authoress declares, abounds in figurative representations alike in religious and civic architecture. Chapter III (pp. 59-69, figs. 38-48) illustrates architectural decoration in brick, and it is argued that there are few Anatolian buildings — mausoleums and small mosques — made of brick; for this was generally used as a non-structural material. Chapter IV (pp. 71-76, figs. 49-53) treats of decoration in stucco with fresco work. The former is not common in Anatolia, and the latter is a feature that is certainly not well known. Chapter V (pp. 77-109, figs. 54-91) is the longest one and deals with architectural decoration in tiles and the customary ceramic material. The authoress stresses the importance of this type of architectural decoration and the discrepancy between its obvious presence and the scanty finds of commonly used ceramic material, though the latter includes all the categories that were most typical of the period. Chapter VI (pp. 110-123, figs. 92-105) deals with decoration in wood. This has been well documented by numerous studies; and Mrs Öney accurately explains the techniques used in intaglio work. Noteworthy is the section devoted to mosques where not only the *minbār* (traditionally in wood) but also the supporting structures are decorated with wood carving, the latter often being painted with fine floral and geometrical motifs. Chapter VII (pp. 125-

132, figs. 106-113) is concerned with carpets which are an important cultural and artistic expression of the Seljuk period. Here the authoress gives way to pan-Turkish temptations — fairly well held in check throughout the rest of the book — by asserting that the technique of knotting carpets originated among Turkish peoples. The truth is that this technique most likely originated in Central Asia. Next come two very brief chapters devoted to textiles (pp. 133-135, figs. 114-115) and glassware (pp. 136-137, figs. 116-117), both affording proof of the scrupulous way the volume has been put together. Chapter X (pp. 139-151, figs. 118-130) is the last written by Mrs Öney. It deals with the painting of miniatures, and even though little significant material survives, the lucid discussion of this subject makes interesting reading: the prototypes of such miniatures derived from frescoes of the 9th-12th centuries.

As was pointed out, the volume is completed by a chapter on metalwork by Ü. Erginsoy (pp. 153-178, figs. 131-148): it is accompanied by black and white illustrations whereas Mrs Öney's text is illustrated by coloured plates. The author sub-divides the material into seven categories according to the techniques used: the most favoured technique was intaglio work, but Anatolian artisans experimented successfully with others.

A great expert in Anatolian, and in Seljuk art in particular, Mrs Öney has already contributed to each of these fields of investigation with monographs and specialized publications. In this volume she provides, us with a vast survey of monuments and products accompanied by historical and artistic information of a high technical and didactic level. Intended for a reading public that is not necessarily specialized, the book amounts to a real manual of the history of art. In this way, the many definitions, repetitions and summaries of certain ideas are justified: it is a process that at times makes for slow but, it must be said, never boring reading. The book, moreover, has many virtues: it is thorough, indeed, I would say complete from many points of view; there is an orderly arrangement of the subjects discussed and — where the latter are concerned — of certain primary concepts and others deriving from them; and it contains a number of acute perceptions — for example, regarding decoration in brick and mosaic, and glassware.

Finally, I think it can be argued that the originality of the work is really due to the fact that in a sense each chapter has been "sacrificed" to produce an extraordinarily effective and valid synthesis, and that a unique volume has been put together embodying themes and classifications peculiar to the Seljuk art of Anatolia. It constitutes at once an end-point in Mrs Öney's research — an assemblage of material that she has studied and collected with patient investigation — and a starting-point for a more thorough analysis of each individual monument and object.

Maria Vittoria Fontana

ANTHROPOLOGY

M. Jamil Hanifi, *Historical and Cultural Dictionary of Afghanistan* (Historical and Cultural Dictionaries of Asia, No. 5) (Metuchen, N. J., The Scarecrow Press, Inc., 1976, viii-141 pp.).

Bibliographies which aim at being complete should not disregard even minor and poor contributions dealing with the chosen subjects, but this *Dictionary* may appropriately be ignored even by the most scrupulously complete of Afghan bibliographies.

The book has most unfortunately appeared in the series of the « Historical and Cultural Dictionaries of Asia » edited by Basil C. Hedrick, Director of the University Museum, Southern Illinois University at Carbondale, who has written a Preface. This gives us some essential pieces of information about Dr Hanifi, who is Associate professor of anthropology at Northern Illinois University and also the author of *Islam and the Transformation of Culture* (New York 1974) and « several anthropological articles and reviews in professional journals » — some of the latter are quoted in the bibliography — that we sincerely hope are better than this incredible dictionary.

In the introduction Dr Hanifi tries to place himself on the safe side by recognizing that « Issue might be taken over the inclusion and/or exclusion of cultural and historical categories in this book », and stating that « Professional responsibility is accepted by the author for both, but careful attention is drawn to the fact that this is a *selection* of cultural and historical categories considered *significant* by a native Afghan cultural anthropologist ».

This is true. One should always be careful in discussing the inclusion and exclusion of items in a dictionary of this kind, but the criteria by which such choices are made are subject to free discussion by any reviewer. And one must say that what appears significant to a « native Afghan cultural anthropologist » is not a scientific criterion at all, no more than the one based on what appears significant to a kind-hearted or well-mannered cultural anthropologist, unless we take the author's statement in the sense that his dictionary is to be considered as an object rather than a tool of research.

Unfortunately there is only one problem, and a very simple one — Dr Hanifi is an Afghan who knows very little about the history and culture of his own country. I know of a great many Afghans who have a deep knowledge of the field — this *Dictionary* should have been written, to the reader's benefit, by one of them.

I do not think that Dr Hanifi would ever be able to give a reasonable explanation for the choice he made of including — in the field of archaeology — "Dupree, Louis", while excluding D. Schlumberger, A. Foucher, R. Ghirshman, J. Hackin, P. Bernard, and all the other scholars (mostly French) who did a lot of archaeological work in Afghanistan (a few of them are merely named, with wrong initials, *s.v.* "Hadda"). Professor Dupree himself must feel rather embarrassed. And why did the author include such characters as "Qayyum, Nawabzada Abdul", the founder of the Islamia College, Peshawar along with Sir George Roos-Keppel, the iron-handed Governor of the NWFP (« an Englishman by the name of Roos-Keppel »!), and "Roos-Keppel" himself — who have very little to share with Afghanistan (Roos-Keppel fought against Afghanistan) —, when he excluded others who were active in Afghanistan, such as Mahmud Tarzi (ignored even *s.v.* "Amir Habibullah Khan" and *s.v.* "Amir Amanullah Khan")? And how can one accept that Charles Masson and H. G. Raverty are excluded even from the bibliography while separate entries are reserved for Arnold Fletcher, D. N. Wilber, Nancy Dupree, etc.?

But after all the question of inclusion or exclusion of this or that "category" will appear of very little importance when one goes through the book and realizes what the content of the various entries is. I will try to spare the reader's time and limit myself to a selection of mistakes and funny statements that may prove at once elucidatory and amusing.

S.v. "Afghan": « A citizen, national, or inhabitant of Afghanistan irrespective of language, race, and ethnic affiliation ». Everybody knows, on the contrary, that 'Afghan' often designates a Pashtun.

S.v. "Afghanistan": « Afghanistan is [...] bounded on the north by the union of Soviet Socialist Republics (Tajik SSR, Turkman SSR, Kirghiz SSR), [...] on the east and south by Pashtun areas of Chitral, Mohmand, Afridi, Waziri, and Baluchistan [...] ». Afghanistan actually borders on Uzbekistan, not on Kirgizistan, as Dr Hanifi believes, and his description of the Pakistani border without even mentioning Pakistan creates confusion in the reader although it does not prevent those regions from being part of Pakistan anyway.

Ibid.: « Afghanistan is the present geographical name of Ancient Aryana ». Once more, pure ideology.

S.v. "Ashoka": « After some great military victories, resulting in 100,000 deaths to the enemy, he was overtaken by guilt and remorse and spent the rest of his ruling years spreading Buddhism throughout the empire [...] ». Once upon a time there was a king...

S.v. "Bactria": « The archaeologic ruins of a Greek settlement are found here, dating to 300 B.C., when Alexander led an expedition to Central Asia and Northwest India. It turned out to be only a raid [*sic*], but this settlement, between the Oxus and the Hindu Kush, was left. [...] ruins include large halls lined with stone columns with carved forge [?] capitals and stone sarcophagi statues [*sic*] ». This is pure phantasy. Is the author thinking of Ai Khanum? No, he really means Balkh, where nothing of the kind was ever found — indeed the entry "Balkh" consists only of a cross-reference to "Bactria".

S.v. "Farsiwan": « *Dari* is the most recent name given to Farsi ». Actually *Dari* is an old term that literally means '(language) of the court' and now designates the Farsi spoken in Afghanistan.

S.v. "Gandhara": « Also a particular art style which combines both Buddhic and popular art styles is characteristic of this region ». A somewhat different explanation of Gandharan art is given *s.v.* "Afghanistan": « From the fusion of Greek and Buddhist art in Afghanistan, the famous and unique "Greco-Buddhist" art was born »; another *s.v.* "History": « Greek realism syncretized with Indian spiritualism and the Graeco-Buddhist art of Gandhara, or Gandhara school of Art, resulted ». The reader may select the funniest of the three, unless he prefers the more revolutionary one he can find *s.v.* "Hadda": « Hellenistic art seems to have had noticeable influence at Hadda, as did medieval Romanesque and Gothic Art of Western European Christianity »!

Many are the inaccuracies (e.g., Mountstuart Elphinstone, *s.v.*, is said to have been an ethnographer; the Afghan Institute of Archaeology is said to supervise the Kabul Museum, *s.v.* "Kabul Museum"; etc.), many are also the dubious misprints: e.g., « Soil Route » (for Silk Route, *s.v.* "History"), « Sogdonia » (*s.v.* "Kajula Kadphise I"), « Durrand » (twice *s.v.* "Amir Abdul Rahman Khan"), « Ferz Kohal » (for Firuzkoh, *s.v.* "Jam minaret"), « Musée Guiment » (*s.v.* "Nangarhar"; but this seems to be no misprint, since it derives straight from *The Afghanistan Republic Annual 1974*, p. 316), etc.

I do not think the reader needs any further illustration of this useless book, but I cannot help quoting one of its last entries ("Zoo"), where the author informs us that « The Kabul Zoo is open during the summer from 8 a.m. to 7 p.m. Winter hours are 9 a.m. to 5 p.m. There is a nominal admission free. There is no fee on Friday, the Holy Day ». You will find nothing on Surkh Kotal, nothing on the Nangarhar irrigation project, nor will you be able to learn anything about Hashim Khan or the Pashtun tribes (Pashtuns are not even listed *s.v.* "Ethnic groups"!), but our ineffable "native Afghan cultural anthropologist" has considered it significant that you can see tigers gratis on Friday.

The book, on the contrary, is not distributed free. Though published in 1976 in the USA, it has only recently appeared in the catalogues of European distributors and is sold at the price of 6.50 UK pounds. Too much for 150 pages of poorly printed though nicely bound nonsense.

Maurizio Taddei

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HISTORY

M. V. Aris, *Bhutan: the Early History of a Himalayan Kingdom* (Warminster, Aris and Phillips Ltd., 1979, pp. xxxiv-344).

The ancient and medieval history of Bhutan was hitherto practically an unwritten chapter. What little we knew was due to the information gathered orally by the rare British officials of the 19th and early 20th century who visited the country or had contacts with its rulers, More recent books are based either on these sketchy and obsolete materials, or else draw in uncritical fashion upon a few standard Bhutanese chronicles. Thus there was ample scope for a thorough scholarly study on this fascinating subject. The author was fully qualified for his task, having gained an intimate personal knowledge of the country, of the people, and of the historical sources during five years of permanence in Bhutan as English tutor to the royal family. He collected a sizable amount of material and worked his way through it with a rigorous scientific method, but at the same time with the enthusiasm of one who is aware of treading unknown ground.

The work is compact and its style is pithy, to the extent of giving sometimes the impression of heavy going. It is divided into five parts. The first deals with the origin myths and their historical associations (7th-9th centuries), i.e. with conditions and events belonging to the period of the Tibetan monarchy. The obscure legend of the Sindhu Raja and the problem of king Ral-pa-can's brother gTsaṅ-ma, his banishment to the south and his lost clans, are two subjects that have been investigated with particular care and with substantial results, although we are still far from final conclusions. Then the author studies the origin of the gDuṅ families of Bum-t'aṅ (pp. 115-145), mainly on the basis of the History of the 5th Dalai-Lama and of the "Gyantse chronicles" as translated by G. Tucci in his *Tibetan Painted Scrolls*. I may add that here as elsewhere the account of the 5th Dalai-Lama is based on the *rGya-Bod yig-ts'aṅ* (of 1434), and that in that work (Thimphu edition of 1979, ff. 103a-106b; for Bhutan chiefly f. 106a-b) there is a fairly long account of "the Duṅ-reṅ (obstinate gDuṅ) called also gDuṅ of the South", which deserves a closer scrutiny.

The second part concerns the Buddhist schools and monastic principalities in Bhutan from the 10th to the 17th century. It was a complicated and obscure period, in which the vagueness of "the pattern of the political issues might apply to almost any region of the Lamaist world". This confused picture is matched by the unsatisfactory quality of the available sources. We must, however, acknowledge that the author has made the best out of a difficult job, throwing several flashes of light in what was hitherto absolute darkness. The *gter-ston,* treasure hunters for concealed books, who are a special characteristic of that period, are also treated at some length.

The third part is essentially a biography of the *źabs-druṅ* Ṅag-dbaṅ-rnam-rgyal (1594-?1651), the towering personality who made the 'Brug-pa school paramount in Bhutan and who was the founder of the Bhutanese theocracy as it existed down to 1907. The author grapples with the awkward problem presented by the end of the *źabs-druṅ*, who went into religious seclusion in 1651, never to emerge again from it, although the fiction of his continued life was maintained until the beginning of the 18th century. He also unravels, at least to some extent, the knotty question of the *źabs-druṅ's* succession, wavering as it did between three different and incompatible systems: heredity (which failed almost at once), incarnation (with three embodiments being possible at the same time: of his body, of his speech, of his mind), and election. This uncertainty was reflected in the confused and haphazard structure of the central government, which was always rather weak in comparison with the lay and ecclesiastic feudal powers of the land.

Part Four gives a sketchy account of developments from c. 1705 to the present day. It is followed by an appendix of chronological lists, a very substantial bibliography of Bhutanese, Tibetan and Western works, and full indexes (Tibetan and General). A fifth part is issued separately in the form of three microfiches containing four texts in transcription and translation: two Bhutanese historical works, the so-called legal code, and the account by the Portuguese Jesuit Estevao Cacella of his visit to Bhutan and of his meeting with the *žabs-druṅ* in 1627.

The book, built upon a solid foundation of painstaking research and of critical sifting of the sources, is a landmark in Bhutanese studies. No doubt it will form the starting point for any further research for a long time to come.

One may regret the small size of the type, which tends to tire the eye if one reads it for any length of time. Otherwise the printing is good and very correct; the binding is excellent.

Luciano Petech

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INDOLOGY

Shyam Manohar Pandey, *The Hindi Oral Epic Loriki* (Allahabad, Sahitya Bhawan Pvt. Ltd., 1979, pp. 4, 28, 32, 504, 56).

The story of Lorik, his wife Mainā and his mistress Cāndā and his martial and amatory adventures is known all over north-eastern India. Being referred to by Jyotirīśvara of Mithila in the early fourteenth century, and therefore well known at that time, it is likely to be at least as old as the Ālhā stories of central north India and may be of comparable age to the folk tale that underlies the dohās of Ḍhola. The Lorik story has the interest of existing both as folk poetry and in early Hindi and Bengali literary versions. The earliest Hindi version, called *Candāyan*, was composed by the sūfī Maulāna Dā'ūd about 1379 and although this work was well known in earlier centuries (it is mentioned by al-Badā'ūnī, and a Persian version of it, now lost, was made in the 15th century) its text was made known to modern students of literature only by the work of Viśvanāth Miśra, Parameśvarīlāl Gupta and Mātāprasād Gupta in the 1960's. M. P. Gupta in his edition of 1967 mentions and draws upon the work which Dr Pandey had begun in 1965 to collect and study Bhojpurī and Avadhī versions of the Lorik story. The present volume devoted to a version recorded near Banaras is the first of several projected by Dr Pandey; a second dealing with an Allahabad (Avadhi) version is now in the press. A further volume will consist of an English translation of the Banaras version, with cultural and linguistic notes. Dr Pandey stresses that the eight versions of the story which he has collected, and intends to publish, differ very greatly in language, style and content. Performances vary in accordance with local traditions and with singers' individual inheritance of the story and of singing techniques from their predecessors, and in addition extempore variations are always made. It will be interesting to see what affinities of content and structure can be established between the collected versions (which have been made in the Gonda, Allahabad, Banaras, Mirzapur, Ballia and Patna districts). Pandey indicates (introd., p. 1) that use of different names to refer to the story as sung in different districts (*Lorikī* or *Lorikāyan* in the north and east, *Canainī* in the west and south) does not imply that in the latter regions only those portions dealing with Lorik and Cāndā are sung, as had been inferred. One wonders in that case whether earlier currency of the literary version in the westerly region (in which it was produced) may have had any influence on the name given there to the folk version.

The book is provided with introductions in both English and Hindi; that in Hindi is slightly fuller and organized on a slightly different pattern. The first section of the English introduction describes the subject matter of the story of the Banaras version with what seems very good judgment of the need to bring out its main themes and overall structure while at the same time including an informative amount of detail suggesting the range of narrative motifs in use, and something of the viewpoint of the whole. A following very detailed section deals with the association of Lorikī with local Ahīr (gvālā) communities, and with individual singers and the circumstances and manner in which they perform. A particularly full and interesting account is given of the singer who recorded the Banaras version. Pandey brings out clearly the cultural importance of his subject matter and provides a valuable record of its contemporary social and community background. Further sections of the introduction deal instructively with styles of singing and the use of recurrent themes and formulae, and a note on metrical structures is included. Pandey notes that Lorikī singers are liable to be influenced by the Ālhā singing style and (Hindi introduction, p. 16) by modern printed Ālhā versions; one of the formulae he cites seems with its recurrent line endings in *-āy* to bear this out. A consistent distinction noted between the Ālhā and Lorikī singers is that the latter are non-professional.

The text as printed is of some 12,500 lines (380 pp.). A Hindi translation and comments on the sense of individual words and expressions is provided. Much effort has been expended on these, and to good effect, since taken together and supplemented by a glossary of some 60 pp. they allow the reader familiar with modern standard Hindi to follow the detail of the Bhojpuri text readily. The Glossary provides a convenient view of an interesting range of lexical and linguistic features, for instance: an abundance of Persian and Arabic words, some common, such as *akil* 'intelligence', some extended with distinctive eastern Hindi diminutive suffixes, such as *afatiyā* (< *āfat*) 'calamity, sorrow', *isaravā* (< *āsār*) 'sign' and some acclimatized verbal forms, such as *ajmāvā* 'test'; occasional Sanskrit loanwords, such as *antaḥkāl*, adv. 'finally' and the semi-tatsamas *utar* 'north' and suffixed *asirbadavā* 'blessings'; and regionalisms such as *ucarai* 'jumps' (with *r*) or *kail mem* 'in doing' with *-l* perfective used nominally. The linguistic material of this book will be valuable as a means to the study of modern Bhojpuri.

This volume is to be welcomed as a valuable contribution to knowledge of a little-known topic in the field of Hindi folk poetry. Its successor volumes will be awaited with great interest.

R. S. McGregor

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TIBETOLOGY

Gedun Chos-'Phel, *The White Annals* (*Deb-ther dkar-po*), *translated by Samten Norboo* (Dharamsala, Library of Tibetan Works and Archives, 1978, 103 pp.).

This English translation of a Tibetan work authored by the famous scholar dGe-ʾdun-cʻos-ʾpʻel (1905-1951) is a rather curious piece of production. dGe-ʾdun-cʻos-ʾpʻel was one of the first, perhaps the first, Tibetan traditional scholar who had access to and tried to utilize the materials brought to light by the Westerners, above all the Tun-huang documents, as well as some at least of the Western studies and translation from the Chinese. He became acquainted with them during his period of collaboration with the late George N. Roerich, whom he assisted in the translation of the Blue Annals (*Deb-tʻer-snon-po*) of ʾGos Lotsawa. The result is a blend of traditional lore and modern scholarship, which may not be well digested, but is interesting all the same from several points of view.

The work was conceived on a large scale, but what remains is a torso. The first six chapters are of an introductory character. Nos. 2 and 3 on terminology and on dress and residence are informative, while nos. 1 and 6 on the sources are somewhat elementary. No. 5 on the system of dating is based on the Singhalese Nirvana era of 544 B.C., never actually used in Tibet and which the translator has neglected to reduce to Western reckoning, leaving thus the reader confronted with a useless complication. Chapter 4 on Tibetan domination in Li (Khotan; but for the author it covers the whole of Central Asia) and Bal (Nepal) is perhaps the weakest of the six.

The main body of the work (chapters 7-12) deals with the origins of the Tibetan people and state, mainly as told in the Tun-huang chronicle, with the reign of Sroṅ-btsan-sgam-po and the chronological problems it raises, with the creation of the Tibetan alphabet traditionally attributed to Tʻon-mi Ṣambhoṭa, with the king's foreign policy, and with his successor.

dGe-ʼdun-cʻos-ʼpʻel's work, on the whole, appears to fall between two stools, being neither avowedly traditional nor definitely modern (his grasp of Western historical methods is rather superficial), with few of the advantages and many of the drawbacks of both systems. Nevertheless, it is an interesting human document, as it reveals the reaction of a fine traditional scholar to the impact of modern Western methods.

The translator seems to have done his work fairly well; his explanatory notes, however, are too short and commonplace to be of great use.

Luciano Petech

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IsMEO ACTIVITIES

In 1980 the financial situation of IsMEO improved greatly compared with the previous year. In July the Act no. 377 was passed, increasing the regular government contribution from 300 to 600 million lire. By the same Act, the Institute also obtained an increase of 100 million lire on the 1979 contribution, which enabled it to meet its financial obligations for the previous year.

The agreements which had been drawn up in 1979 with the Consiglio Nazionale delle Ricerche (CNR) and the Istituto Universitario Orientale of Naples were finalized in 1980. The first agreement provides for a contribution towards publishing costs (120 million lire over three years, of which 30 million have already been received in 1980), whereas the Istituto Universitario Orientale has agreed to pay 30% of the expenses of the IsMEO archaeological expeditions in which it takes part, and to contribute in like measure to the cost of publishing the relevant excavation reports.

Contributions towards the archaeological expeditions organized by IsMEO have also been given by the Italian Ministry of Cultural Heritage (Beni Culturali e Ambientali) (20 million lire) and the Ministry of Foreign Affairs (13 million lire, of which 5 million have been alotted to excavations in Irak and Syria, 4 million in Pakistan and 4 million in Nepal).

A contribution of 25 million lire towards the activities of IsMEO was given by the Ministry of Education.

The Institute also administers several research grants which have been awarded by the CNR for the period 1979-1981. The fields of research are as follows:

1. Archaeological, naturalistic and anthropological research in Swāt (Pakistan), directed by Dr D. Faccenna (1979-1981).
2. Settlement and material culture in protohistoric Sīstān (3500-1500 B.C.), and archaeological, naturalistic and anthropological research in Swāt (Pakistan), directed by Prof. Maurizio Tosi (1980-1981).
3. Archaeological research in Iranian Sīstān (1979-1980). Research in historical archaeology in Iran (1980-1981), directed by Prof. Umberto Scerrato
4. Tantrism and its historical evolution, directed by Prof. Raniero Gnoli (1979-1981)
5. Archaeological research in the Buddhist sanctuary at Tapa Sardār, directed by Prof. Maurizio Taddei (1979-1981)
6. Socio-historical research on the basic doctrinal principles of Ayurvedic science, directed by Prof. Giorgio Monaco (1980-1981)
7. The State in China, conception and reality: revolutionary movements and secret societies in Chinese history, directed by Prof. Piero Corradini (1980-1981)
8. Social life in China from the 3rd to the 9th century A.D. as seen through classical and vernacular literature of the time, directed by Prof. Lionello Lanciotti (1979-1980)
9. Cataloguing of the Tucci Fund of Tibetan manuscripts and xylographs, directed by Prof. Luciano Petech (1979-1980)
10. Religious anthropology of the Indian subcontinent: rites, feasts and values in present-day popular culture, directed by Prof. Fabio Scialpi (1979-1981)
11. The nature and significance of the encounter of the Eastern religious world with the contemporary West, directed by Prof. Corrado Pensa (1980-1981).

On 22nd September the members of IsMEO voted in favour of the new Statute of the Institute, which replaced the former one of 1953. The new Statute is now awaiting ratification by the competent authorities.

In 1980 IsMEO gained an important recognition, namely the "Aga Khan Award for Architecture" for the restoration work done by the Institute at Isfahan under the technical direction of the architect Eugenio Galdieri, in particular in the monuments ʿĀlī Qāpū, Čihil Sutūn and Hašt Behešt. The restoration work done by IsMEO has been described at length by Galdieri and published by IsMEO in *East and West* and in the series *Restorations*. The prize, consisting of a certificate and a contribution of approximately 11 million lire, was collected by the architect Galdieri, on behalf of the President of IsMEO, during a magnificent ceremony held in October in the Moghul gardens of Shalimar at Lahore. The ceremony was attended by the President of the Republic of Pakistan, Zia Ul Haq, the Aga Khan Karim, and the Director General of UNESCO, M'Bow.

The aim of the Aga Khan Award, which was given for the first time this year, is to call attention to definite. and completely fulfilled projects that show an "Islamic way" to modern architecture. Although the award is mostly intended for projects in modern architecture, it considers the restoration of ancient monuments as an essential link between past and future, not as an invitation to stylistic imitation, but as a cultural support to continuity in tradition.

The flattering opinion of the Master Jury (formed of such world-famous architects as Titus Burckhardt and Kenzo Tange) was as follows: "For the meticulous restoration of some of the great Safavid monuments of Isfahan, and for the contribution which this restoration has made to the knowledge of Islamic planning, architecture and construction. The remarkable programme, begun in 1964 and developed by the Istituto Italiano per il Medio ed Estremo Oriente (IsMEO) in collaboration with the National Organization for the Conservation of the Historical Monuments of Iran (NOCHMI), covers not only the restoration of these monuments with the surveys that necessarily precede such restoration, but also the publication of numerous volumes documenting this process. Of particular significance is the training of Iranian craftsmen and technicians and the setting up by NOCHMI of its own work force in specialist skills. The programme as a whole constitutes a model for other countries with similar conditions."

In 1980 a three-year programme of cultural exchange between India and Italy was launched, as a result of the Cultural Cooperation Agreement that had been signed in 1976. At the first mixed committee meeting held in Delhi from 26th to 29th April, IsMEO was represented by Prof. Raniero Gnoli who was thus able to illustrate to the Indian party some important clauses of the programme that provide for the direct intervention of IsMEO in its fulfilment.

As has already been mentioned, the increase of 300 million lire to the government contribution was not approved until July 1980. On account of this delay in the first half of the year the Institute's activities had to be in keeping with the available funds.

In October, IsMEO had the great honour of welcoming the Dalai Lama Tendzin Gyatso who had expressed his desire to visit the Institute. He was accompanied by five Tibetan monks. A large number of scholars and others interested in Oriental philosophy and religions were invited by IsMEO to celebrate the occasion.

The President, Prof. Gherardo Gnoli, after having paid his respects and expressed his gratitude, read an address by Prof. Giuseppe Tucci paying homage to the Dalai Lama and recalling his meeting with him in Tibet in 1948. This reminiscence was reciprocated by the Dalai Lama in his address to those present. The President then accompanied the Dalai Lama on a visit to the Museo Nazionale d'Arte Orientale and to the Library of IsMEO, where a large number of Tibetan manuscripts collected by Prof. Tucci are kept. The numerous works on Tibetan and Buddhist history, art and philology were shown to the Dalai Lama, and some of IsMEO's publications were presented to him.

Missions Abroad

As has already been mentioned in our previous report, the President of IsMEO, Prof. Gherardo Gnoli, together with Prof. Raniero Gnoli, Professor of Indology in the University of Rome, and Prof. Maurizio Taddei, Professor of Indian Archaeology and Art History in the Istituto Universitario Orientale of Naples, visited India, Nepal and Pakistan in December 1979-January 1980 for the purpose of contacting local authorities and institutions about drawing up new cultural agreements in various sectors. As a result of this visit, IsMEO was able to increase its activities in these countries.

Throughout the year, IsMEO was constantly in contact with the Nepalese Department of Archaeology and it was agreed that a group composed of three archaeologists, an architect and a restorer should visit Nepal in February 1981 in order to make a preliminary survey and estimate the possibilities of archaeological and restoration work being done by IsMEO.

Following upon the President's visit to India, contact was maintained with the Italian Embassy as well as with Italian students of Indology in order to examine the possibility of establishing a branch of IsMEO in India, to serve as headquarters for the Institute's research work there as well as being of use to other scholars visiting India.

As for IsMEO's cooperating with the All India Kashiraj Trust of the Maharajah of Benares, whom the President had met during his brief stay in that city, consideration is being given to the possibility of publishing a Puranic anthology in Italy, in collaboration with an Italian publishing house.

The President's visit to Pakistan, and the permit granted by the local authorities to enter the Darel valley, made it possible to carry out a survey in the valley with a view to locating sites and monuments of archaeological interest. The results of the survey are given below in the archaeological report.

Prof. Victor Aldo Fasano, Head of the Istituto di Neurochirurgia in the University of Turin, on his return from a visit to China that was promoted by the Italian Ministry of Foreign Affairs, was invited by IsMEO to spend a few days in Bombay and Delhi, as he had already done in the previous year. Prof. Fasano was thus able to renew his acquaintance with members of the Indian medical circles with whom he had talks on the present-day problems in brain surgery and the new techniques used in this branch of medicine. Prof. Fasano gave lectures in the leading medical institutes in Bombay and Delhi, which included the showing of a documentary film made in his own institute and illustrating the latest use of the "trilaser" in operating brain tumours. All this aroused the interest of the local press and led to a radio interview as well. On his return Prof. Fasano reported that his Indian colleagues were well-disposed towards establishing an exchange between India and Italy in the medical field.

The architect Eugenio Galdieri represented IsMEO at the "3rd International Symposium on Mud Brick (Adobe) Preservation" which was held at Ankara from 28th September to 4th October, under the auspices of the National Turkish Committee ICOM-ICOMOS. In the section concerned with "Mud Brick Buildings and Historical Centres" he read a paper entitled "The use of raw clay in historic buildings: economic limitation or technological choice?".

Lectures and Exhibitions

During the year IsMEO invited several scholars of renown to give lectures in the Institute. In February Dr Zémaryalai Tarzi of the University of Human Sciences of Strassbourg, gave a talk, illustrated with slides, on the recent archaeological finds at Hadda. In March Prof. Walter Heissig of the University of Bonn spoke on Mongolian Epic Poetry. In the month of May Prof. Jacques Duchesne-Guillemin of the University of Liège gave an illustrated lecture on myths and symbols in ancient Iran, while Prof. Jean Kellens of the University of Mainz and Prof. Pierre Lecoq of the University of Liège spoke on the present state of studies on Avestic and Old Persian.

An exhibition of musical instruments from Korea was organized by IsMEO together with the embassy of the Republic of Korea and the Museo Nazionale d'Arte Orientale. The Korean Embassy offered refreshments to those attending the opening ceremony on December 4th. The exhibition met with such success that the planned period of a fortnight was extended until 31st January 1981.

IsMEO also collaborated with the Accademia Filarmònica Romana in the organizations of concerts of Indian dance and music that were held in June.

Italian Institutes and Cultural Centres in Asia

By convention with the Italian Ministry of Foreign Affairs, IsMEO gave a grant of 40 million lire towards the activities of the Italian Institutes of Culture in Asia. According to the terms of the convention, the Institutes of Culture, in agreement with IsMEO, promote cultural activities in their respective countries, and an annual report on the whole programme is sent to IsMEO.

In India the preparation of the first Hindi-Italian dictionary is being carried on by a team of experts coordinated by Prof. L.P. Mishra, Professor of Indian Languages and Literature in the University of Venice, under the general direction of an advisory board. Another editorial project is the translation into English of the Tantraloka of Abhinavagupta, a work that has already been translated from Sanskrit into Italian by Prof. Raniero Gnoli.

In Indonesia the annual contribution of IsMEO was allotted to the "Antonio Pigafetta" Institute of Culture for the publication of an Italian-Indonesian conversation handbook. This project follows upon the success of the Italian-Indonesian dictionary that was published in 1979 by the Italian Embassy in Djakarta and edited by the "Antonio Pigafetta" Institute, with a grant from IsMEO.

As regards Japan, IsMEO, together with the Italian Embassy and the Ministry of Foreign Affairs, is working on a project for the establishment of a Centre of Oriental Studies in Tokyo, in order to facilitate research work by Italian scholars.

Restoration Report

Iran

On account of the political situation in Iran, the restoration campaign which had been planned for the second half of 1980 was not able to take place. Nevertheless contacts were maintained on a technical level between IsMEO and the National Organisation for the Conservation of the Historical Monuments of Iran, through the Archaeological Section of the Italian Institute of Culture in Tehran, and also with young Iranian officials who had returned to Italy to continue their studies in restoration. The technical office of IsMEO was kept up to date on the work being done, especially in the Friday Mosque at Isfahan, which it appears is being carried on according to the project of IsMEO.

Afghanistan

IsMEO was compelled to cancel the programme that had been drawn up for 1980. From the vague and fragmentary information that has been received, it seems that the monuments at Ghazni, including the ones which the IsMEO mission was restoring, have not suffered.

Archaeological Report

The archaeological missions of IsMEO were able to work in Pakistan only this year. With regard to Iran and Afghanistan, the study of the finds and other data from the excavations of the past years continued in Italy, with a view to the publication of the excavation reports.

In Pakistan excavation campaigns were conducted at Aligrāma, where the remains of an interesting building, probably having a ritual purpose, were discovered, at Ghāligai, where the finds made in the present excavation, mainly stone and pottery utensils, confirmed the results of the previous missions, and at Saidu Sharif, where almost all the buildings of the Buddhist monastery were brought to light.

A survey was also made in the Darel valley, which had been indicated by Prof. Giuseppe Tucci as being of great archaeological interest. Rewarding results were obtained, with the locations of numerous settlements where a considerable amount of pottery was collected on the surface.

A preliminary report of the missions is given below.

Courses of Oriental Languages and Culture

The courses of Oriental languages and culture were held regularly in Rome, with 192 students enrolled for the year (12 in Persian, 23 in Hindi, 98 in Chinese, 25 in Tibetan and 36 in Japanese). 26 students gained their diploma. The annual prizes were awarded to Marina Pasquali and Vilma Carone (ex aequo) for the first year, Elisabetta Corsi for the second year, and Maria Cristina Gaja for the third year.

IsMEO also gave a contribution to the Milan Branch for the annual prizes in the courses of Oriental languages and culture, that are run independently by the Branch with the aid of the Commune of Milan. This year 587 students were enrolled, and 20 obtained their diploma. Prizes were awarded to Paolo Magnone for the first year, Simone Dalla Chiesa for the second year, and Anna Ongaro for the third year. The Milan Branch also receives an annual contribution from IsMEO for its cultural activities.

Scholarships

The Afghan student Haroon Olomi, who has by now almost completed his degree course in medicine at the University of Bologna, continued to receive his scholarship from IsMEO during 1980.

Library

The cataloguing of new books continued, as well as of the miscellanea of the Tucci Fund and of the single articles in all the periodicals received by IsMEO.

In 1980 the Library staff was increased by four new members, who were sent by the Ministry of Cultural Heritage in conformity with the Act no. 285 on youth employment.

The Lama Jampel Sanghe Ati continued his job of cataloguing the library's Tibetan manuscripts with the help of Dr Ramon Prats. The work forms part of the aforementioned research project "Cataloguing of the Tucci Fund of Tibetan manuscripts and xylographs", which is directed by Prof. Luciano Petech and financed by a CNR grant.

Photographic Laboratory

Work in the photographic laboratory continued as usual. As well as printing the photos taken on the archaeological missions, the laboratory also helps the Cultural Service of IsMEO in the preparation of material for exhibitions and cultural activities in general, and also provides a photographic report of the various events. This year approximately 21,000 photos were printed.

All of the photographs, with the exception of those concerning the cultural events, are kept in the records of the Museo Nazionale d'Arte Orientale which is responsible for their cataloguing.

Publications

In 1980 the following publications appeared:

East and West, vol. XXVIII 1-4, 1978, pp. 346.

Il Giappone, vol. XVII, 1977, pp. 169.

Cina, vol. 15, 1979, pp. 382.

Brief Report of the Archaeological Missions of IsMEO in Asia

Pakistan

In the 1980 season (August-November) the Italian Archaeological Mission in Pakistan, under the direction of Dr D. Faccenna, conducted excavations at the sites of Ghālīgai, Aligrāma and Saidu Sharīf I (Swāt), and a survey of the Darel valley.

Ghālīgai

In August and September digging was resumed, under the leadership of Prof. G. Stacul, in the Ghālīgai rock-shelter, where the previous excavations had been made in 1967 and 1968, (*EW*, XVII, 1967, pp. 185-219; *EW*, XIX, 1969, pp. 44-91). The works were directed by Prof. G. Stacul, assisted by Mr Ahmad Aftab Khan as representative of the Archaeological Department, Government of Pakistan. The main aim of the dig was to gather further evidence on the earliest cultural periods, from the beginning of the 3rd to the beginning of the 2nd millennium B.C. (Periods I-III), which have so far been attested to in the valley in this site only.

The two new trenches (area I and area J) covered a total area of about 130 square metres, and reached the natural soil or bed-rock in several points. On the whole the stratigraphical and cultural sequence confirmed the evidence that had been gathered in the previous excavations.

Layers ㉓-㉑ belong to Period I (first half of the 3rd millennium B.C.); layers ⑲ and ⑱ belong to Period II (second half of the 3rd millennium B.C.); layers ⑰ and ⑯ belong to Period III (beginning of the 2nd millennium B.C.); layer ⑮ belongs to Period IV (*c.* 1700-1400 B.C.). Layer ⑫ can be dated to *c.* 3rd century B.C., while the upper layers ⑥-② belong to Islamic times.

In most of area I layer ⑰ lies immediately above bedrock (fig. 1) and there is no evidence of the earliest occupation layers, whereas in area J, where the rock-sheltered area extends eastwards, there is plentiful evidence for the Period I and II layers ㉓, ㉑, ⑲, ⑱. In area J walls built of large pebbles and irregular blocks of stone were found belonging to layer ㉑ and layer ⑫ (fig. 2), and a wide stretch of pebble floor-paving formed the bottom of layer ⑱ in the rock-sheltered area.

The lithic industry finds from layers ㉓ and ㉑ made a particularly rich collection, consisting of pebble artefacts of granite, limestone and quartzite. There are "choppers" (figs. 3, 4), wedges shaped like "orange segments", and thin flakes on flat, oval-shaped pebbles with a cortical surface on one side. In layers ⑲ and ⑱ the pebble artefacts completely disappear, while in layers ⑯ and ⑰, there is evidence of some types of discoid or ovoid cores and of "orange-segment" stone wedges.

The pottery from layers ㉓-㉑ is hand-made, ranging from brown to grey in colour, and it includes a fragment of a bowl on a stand. The fine, wheel-turned pottery from layers ⑲ and ⑱, which is usually decorated with horizontal black-painted bands, includes a carinated cup, two fragments of bowls on stands and some large pots with narrow necks. The bulk of the pottery from layers ⑰ and ⑯ is comprised of hand-made, thick-walled shapes, most of which show a basket-impression on the outer surface of the base. Fine, grey-black burnished ware was recovered in layer ⑮, together with brown-grey gritty ware and black-on-red painted, wheel-turned ware.

As in the previous excavation, there were very few fauna finds. The analysis of the soil samples, which were mostly taken from near hearths, led to the identification of burnt vegetable remains in the soil from layers ㉓, ⑲ and ⑰.

Aligrāma

Excavating was resumed in the proto-historic settlement at Aligrāma on 21st September and continued until 6th November. Staff members were Dr Sebastiano

Tusa, Mrs Patrizia Zolese and Dr Ignazio Valente, who were assisted by Mr Siddiqui as representative of the Archaeological Department of Pakistan.

The main aim of this year's campaign was to find out the exact extent of the settlement in its lifetime. At the same time a special effort was made to discover an area that served a specific function, as no such construction had so far come to light. Luckily, the first results of this campaign fulfilled our expectations. In an area that had hitherto remained unexplored, in the northern part of the site, the trenches U and U¹ were dug. Trench U, 10 m. long and 5 m. wide, running north-south, revealed scanty traces of settlement. There was an isolated wall and evidence of the cut in the rock belonging to Periods IV and V of the Aligrāma sequence (9th-5th centuries B.C.), but on account of the poor state of preservation it was decided to fill in this trench after the finds had been recorded.

Trench U¹, 15 m. south of the first trench, measured 25 m. × 10 m. and ran in a north-south direction. The uppermost layer revealed the remains of a very important building of which only a few rows of masonry have survived. Its regular layout and the filling indicate the peculiar character of this building. Two large, almost symmetrical fire-places were situated in the southern part, near the entrance. A stone-lined post-hole was placed further north, and beyond it, in front of a semi-circular slab set into the floor, there was a large central fire-place lined with stones. To the far left of this rough "altar", i.e. in the northwest corner of the building, some hemispherical red bowls were found, and another, carinated bowl of Iranian type was found near the "altar".

More extensive and thorough exploration will of course be necessary in order to ascertain the ritual character of this building; for the time being we can say for certain that it was an important building in the settlement and that it served a particular purpose. The pottery found there dates it without a doubt to Period VI in the Aligrāma sequence (Ghālīgai VI-VII), that is to say, the final period of the protohistoric settlement, immediately before its destruction (early 5th century B.C.).

Beneath this layer there was an extensive area of occupation, with structural remains belonging to Aligrāma Period V. Still further below, another important discovery was made. In the southern part of the trench a massive filling of sand covered what was originally the surface of a tilled field, with clearly visible traces of the primitive system of ploughing. Shallow furrows ran parallel to each other, *c.* 30 cm. apart, in a NW-SE direction, almost the same as the present-day direction of the furrows. The same layer was found in the excavation in the northern part of the trench. The only finds so far are a shallow well dug in the soil, and a bench near it. This layer, with the traces of ploughing and the well, belongs to the Aligrāma Period IV (Ghālīgai V), that is to say, between the 10th and 8th centuries B.C. in terms of absolute chronology.

As well as excavating the two trenches U and U¹, we also resumed digging in the areas that had been excavated in the three previous campaigns. All the balks between the trenches P-Q, O-S and Q-S were removed, and trench S was widened, giving us a much clearer picture of this area, which we have named the "work-site". Balk P-Q (2 × 5 m.) revealed a long wall that bounded a furrow (trench Q) which was filled seasonally by a stream. On the other side of this wall there was a room with its original floor, on which several vases were found *in situ*. All the finds belong to Period VI of the Ghālīgai sequence. Balk O-R (2 × 5 m.) revealed the wall of a room that had been excavated in trench R in the previous campaign. This room, which was used as a workshop, contained a great deal of pottery and perforated schist slabs.

The widening of trench S (4 × 11 m.) revealed an interesting terrace. It was situated immediately uphill from the structures in trench O, so as to protect them from the stones rolling down the hillside.

On the terrace was found a group of miniature pots that had been placed there for ritual purposes. The trench also yielded another mould, with a pendant on one side and a pin with a flat, round head on the other. This find provides further evidence for drawing up a typology of the metal-working industry. The finds and the structures belong to Period VI of the Ghāligai sequence.

At the northern edge of what was presumed to be the extent of the settlement, on the ridge forming its boundary, another trench, V, was excavated. An occupation layer belonging to Aligrāma Period VI was revealed. Further evidence was also provided of the fashion of cutting the rock for the construction of the houses. As well as the remains of walls built up against the rocky outcrop, we also found a good example of a well that had been sunk in the rock.

Saidu Sharif I

The third excavation campaign in the Monastery (figs. 5, 6) at the archaeological site of Saidu Sharif I (Swāt) began on 4th October and came to a close on 25th November 1980. The work was directed by Dr Domenico Faccenna with the assistance of Drs Pierfrancesco Callieri and Francesco Noci, and with Prof. Giuseppe Tilia as draughtsman. The Archaeological Department of Pakistan was represented by Mr Aftab Ahmad Khan and Mr Fazal Wahid.

The present campaign affected the west and south sides of the monastery, outside its boundary wall, and the inner court. On the western side, the northern part of the western sustaining wall was revealed. It continues north of the northwest corner of the boundary wall as far as the rock, which is cut in the same alignment. Another cut, at right angles to the first, forms the northern boundary of the Stūpa terrace. The meeting point of the two forms the corner of the Stūpa terrace, with impressive walls (*c.* 4 m. high) cut in the rock. The northern part of the western sustaining wall has mostly caved in (fig. 7), which means that this part cannot be excavated until it is possible to consolidate the buildings. Outside the northwest corner of the boundary wall, on top of the alluvial strata, some irregular structures were found that bear witness to an occupation belonging to a very late phase. On the southern side of the monastery, outside the boundary wall, where erosion has badly affected the hillside, excavation revealed a group of buildings (fig. 9) that turned out to be of great interest, in spite of the fact that a large part of the floors and walls had been washed away.

Five rooms could be made out, of different shapes and sizes, that can be added to the five that were discovered on the eastern side, in its southern part, in the 1979 campaign. A large quadrangular room in the southwest corner (SR 10), with the foundation of a pillar in the middle, probably served as an assembly hall. Further south, at the bottom of the eroded slope, the foundation of a smaller, rectangular room came to light (SR 12). The function of this room is not clear. East of the probable assembly-hall were revealed three rooms in alignment with the southern side of the portico. They communicated with the portico by means of doors in the southern boundary wall and were bounded on their southern side by the sustaining wall that was built on a projecting surface 2 m. below the floor level of the rooms. One of these rooms (SR 8) is especially interesting as there are two stone-built drainage channels leading from it. One of these runs southwards and comes out through an opening in the southern sustaining wall, whereas the other one runs northwards across the portico into the court and then bends back southwards across the portico again and through the rooms SR 4 (fig. 10) and SR 7 south of it and then leads outside to the east of SR 5.

In all these structures, as in those discovered in the previous campaigns, there are elements pointing to a modification in the layout of the monastery at various stages of its existence. For instance, from some exploratory trenches dug on the south side of the portico, it could be seen that the row of doors connecting the structures with the portico on the southern side were walled up at some stage, which goes to show that the erosion of these structures had begun fairly early on, and in any case while the monastery was still being used regularly. In another room (SR 5) the filling of the foundation consisted mostly of pieces of baked brick that must have come from an earlier building in the monastery area, of which no traces have been found.

Inside the boundary wall of the monastery the western side of the portico was explored. A drain was discovered leading from the inner court, under the portico and WR 6, and beyond the boundary wall on the western side: it was filled in at a later stage.

In the inner court the last two squares were excavated, where the balks had been left. In the northeastern corner of the court a round pit, partly filled with ash, charcoal, and burnt potsherds and soil, was revealed.

Trial-trenches were dug in the areas north and east of the boundary wall. These showed the profile of the ground on the northern side where it slopes upwards to the north, and revealed some rough structures built on the former external paving, up against the northeastern corner of the boundary wall.

A trench dug on the Stūpa terrace, immediately south of the Main Stūpa, brought to light a grave (fig. 11) whose upper part had been removed in the process of paving the Sacred Area. The bones were in anatomical position, but unfortunately there were no grave goods. The discovery of this grave, the third to be found in the Sacred Area, confirms our hypothesis that this area was formerly occupied by a graveyard.

In connection with the architectural study of the Main Stūpa and its theoretical reconstruction, one of two main areas that had previously been left unexplored for this purpose was excavated; these areas are to the west of the stairway of the Main Stūpa (fig. 12) and to the east of its square base, between *stūpas* nos. 15 and 13. The theoretical reconstruction was drawn by Prof. Tilia.

Among the more noteworthy finds, apart from the iron objects, pottery and coins, are four potsherds with Kharoṣṭhī characters on them (Inv. nos. S2162, S2254, S2255, S2256), a small terracotta plaque displaying the figure of a *rabab* player in relief (Inv. no. S2167), a green schist statuette of a kneeling figure (Atlas?) (Inv. no. S2231) (figs. 13-16). The finds were inventoried continuing the previous numbering. The inventory numbers of the present campaign go from S2160 to S2257, ninety-seven items in all.

Darel Valley survey

After a long preparatory period, the Italian Archaeological Mission in Pakistan, led by Dr Domenico Faccenna, conducted an archaeological and architectural survey in the Darel valley (Indus Kohistan).

Our interest in this valley arose out of the stimulating conclusions reached by Prof. Giuseppe Tucci in his research into the history and protohistory of the northwestern part of the Indo-Pakistani subcontinent in the light of the latest archaeological discoveries. We take great pleasure in recalling that it was Prof. Tucci who promoted this expedition. The idea was well received by the Archaeological Department of Pakistan, under the directorship of Dr Ishtiaq Khan, who forwarded the request for a permit to the Ministry of Culture. The reply was affirmative.

The field work was done by the archaeologists Prof. Umberto Scerrato, Prof. Giorgio Stacul, Dr Francesco Noci and Dr Sebastiano Tusa, the Archaeological Department being represented by Mr Siddiqui. The team left Saidu Sharif on 26th September and returned on 5th October. In Darel they stayed at the Gumari Rest House, in the central part of the valley.

The archaeological survey was conducted by Prof. Stacul and Dr Tusa. A large number of settlements were located throughout the valley. In each of the sites topographical information was annotated and pottery finds on the surface were collected. Some of the sites are noteworthy for the architectural remains which can still be seen above ground.

In the upper part of the valley, near the village of Hychot, three main settlements were located. The northernmost one, Tokri Koṭ, is situated high up on a rocky hillside at the point where the Darel and Tota valleys meet. The Tota road leads to the Kambari valley, whose deposits of copper, iron and lead are among the most important in the whole region. The position of the site, where small rectangular rooms are still visible, makes it more likely to be a monastery or a fortified outpost than an ordinary village. The other two large settlements in the same area are at Jaduri and Urali-Chuk. The latter is in the centre of the valley, near the river. A number of structures can still be seen, including a large rectangular building in a dominating position. Beyond the settlement, right by the river, there is a huge rock overlooking the area. According to local tradition there used to be a *stūpa* on top of this rock, and, as a matter of fact, evidence of structures can still be seen. What is more important, however, is the discovery on the rock of a large number of potsherds, some of them incised, as these will be extremely helpful in identifying the site.

Other sites were located in the middle and lower parts of the valley. Most of them (Gilni, Dalot, Rajkoṭ, Dayot, Doki Bari) have the same type of massive architecture as the aforementioned sites. Without a doubt, the most noteworthy settlement is Rajkoṭ, whose enclosure wall is certainly worth investigating more thoroughly. Doki Bari is also very important: a wide, open rectangular space, surrounded by a wall with round structures built up against one of its sides, is situated between the two highest points of the settlement. Two identical, symmetrical buildings with a regular layout and square rooms occupied a prominent position in each of these parts.

The preliminary study of the pottery collected in all these sites has not helped us to date the settlements as its typological features are quite original in comparison with the wares collected so far in the neighbouring regions. The state of preservation of the buildings would seem to indicate that life continued in these settlements until fairly recent times, i.e. a century or two ago. More detailed information will no doubt be gained from a thorough study of the pottery.

This preliminary hypothesis is also confirmed by the discovery of other sites in a much worse state of repair that have pottery with quite different characteristics. In particular, the extensive site of Hazuri Koṭ, which is situated on the topmost natural terraces on the left slope in the middle Darel valley, is one of the oldest settlements located so far. Very few traces of the walls can still be seen above ground, and the completely different appearance of the pottery would point to this site being much earlier than the others. This is supported by the finding of two large storage jars and a fragment of a carinated bowl that recalls the similar type found in the Maurya layers of the settlements further south. A fragment of a similar bowl was also found in another site (Shah Mal), together with the knob base of a large jar, though it was not possible to associate them with visible architectural remains.

Opposite Hazuri Koṭ, on the other side of the valley, there was a sacred area (Soni Koṭ), containing a *stūpa* on a square base, with square rooms on two sides that were bounded by the outer wall.

In conclusion, a quick glance at the pottery that has been collected reveals different classes and techniques that probably belong to different cultural periods. For the time being, very few types of rims and decorative patterns can be compared with the pottery of historic times from Swāt and the neighbouring regions. The bulk of the pottery seems to be mainly characteristic of the Kohistan and Shinaki regions.

Several articles of copper, stone and shell (Inv. nos. V 1430-1454) were purchased from farmers in different villages. These include beads of cornelian (three of them with an incised pattern), agate and shell, a spindle-whorl made from shell, and a copper mirror. A typological comparison would suggest that some of the articles may be dated to the 3rd-2nd centuries B.C. It is important to note that, up till now, the northern parts of the Darel and Tangir valleys, together with Kombari, are known as being sources of copper, iron, lead and other minerals, including those used to obtain colouring substances and medicines. Further exploration of the actual mineral basins would be very useful, in order to identify possible traces of ancient workings. In this connection, the discovery of a large deposit of copper utensils at Manikiala Pain (middle Darel Valley), that Jettmar has dated to the protohistoric period, is indicative. The large number of settlements in this valley could be explained by the exploitation of these mineral resources.

On the way back to Swāt, a quick trip to the Tangir valley enabled us to see sites of a similar type. At a brief glance it would seem that this valley was not so densely settled as the Darel valley. One of the sites worth mentioning is Dabast. It seems to be a very ancient site, judging from the pottery and from a grave which was completely lined with stone slabs (the grave had unfortunately been opened and there was not even a fragment of the original furnishings left). This site occupies an important position, at the starting point of the road linking the Swāt valley and the Tangir valley via Kandia.

Prof. Scerrato and Dr Noci made a brief survey of the wooden sculpture, of which there is still plentiful evidence left. This sculpture is one of the peculiar aspects of the material culture of this region.

In the Darel area, in Manikiala Bala and Manikiala Pain, sketch plans were drawn of the two main mosques, of two interesting ziyārats, and some graves with carved wooden fencing. In Manikiala Bala a rare gravestone in the shape of a bird was found.

A short but systematic exploration of the villages of Dodokoṭ and Birokoṭ was made. A large number of photographs were taken to document the surviving graves and the anonymous ziyārat on the mountain of Dodokoṭ, and sketch plans were drawn. Unfortunately we also noted that the Great Mosque of Dodokoṭ had been completely destroyed. All that is left is a single, splendid pillar that has been re-used as a support in a smithy. On the other hand, the Birokoṭ mosque is in a good state of repair: a sketch was drawn of its ground-plan, which is one of the most interesting ones in the area. The assembly area (*jirga-bitō*) is still in good condition; it has also survived in the mosques at Manikiala Bala and Manikiala Pain but, especially in the latter, it is rather the worse for wear.

In the short expedition to the Tangir valley our attention was centred on the part of the valley between Kam and Phururi. Sketches were drawn of the two main mosques, as well as of the numerous wooden graves that can be found near the mosques and in the cemeteries along the roadside. In this valley, too, the art of sculpting in wood is now dying out. The more recent examples are rough and of poor quality, and are mostly found in private houses. The graves are all old and here, too, the tradition of the carved wooden fence around the grave is dying out: nowadays only rough wooden elements are used.

One of the purposes of our expedition was to gather evidence of the craft of wood-carving in the area in order to complete the research that is being done on the wooden mosques in the Swāt valley. This research aims at establishing the origin of the "Hellenistic" element in this ornamental sculpture, which A. Stein traced back to survivals of Gandharan motifs. It is our opinion that this "Hellenistic" element has a more heterogeneous origin and that its main connections are with Islamic culture.

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ILLUSTRATIONS

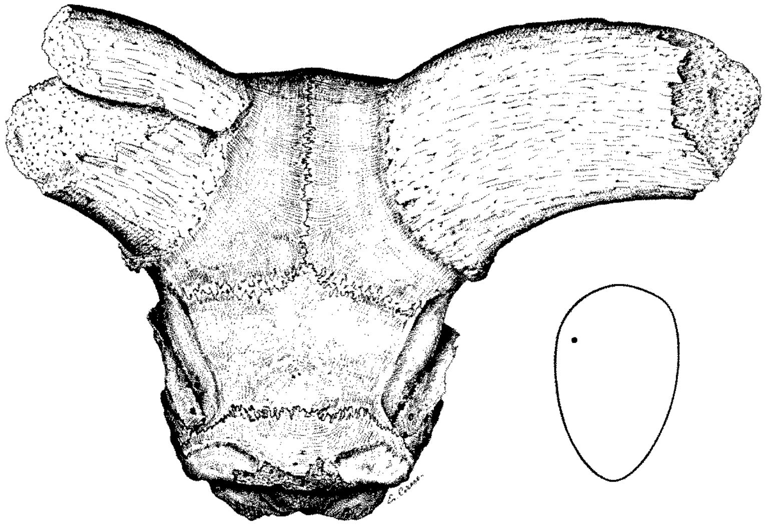


Fig. 1 - *Ovis vignei* from Shahr-i Sokhta. Dorsal view and cross-section at the base of the right horn-core (scale 1:2).

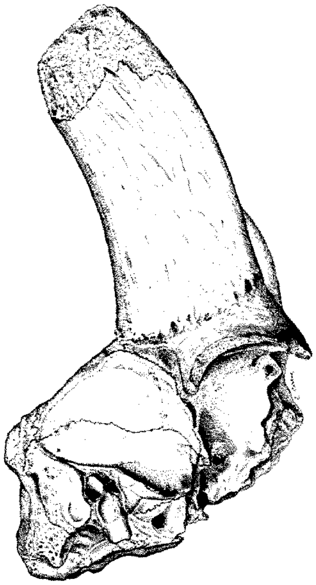


Fig. 2 - *Ovis vignei* from Shahr-i Sokhta. Lateral view (scale 1:2).

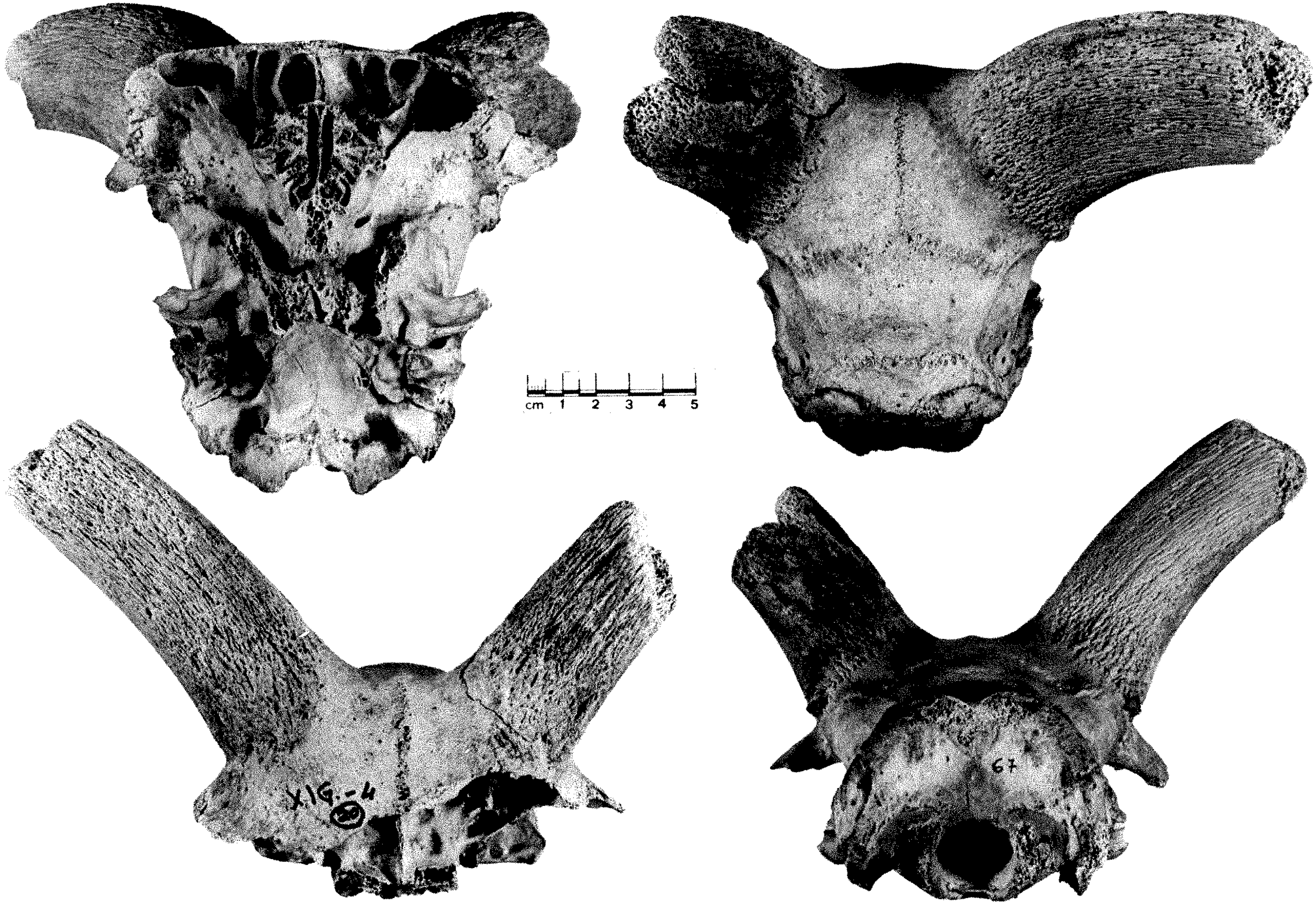
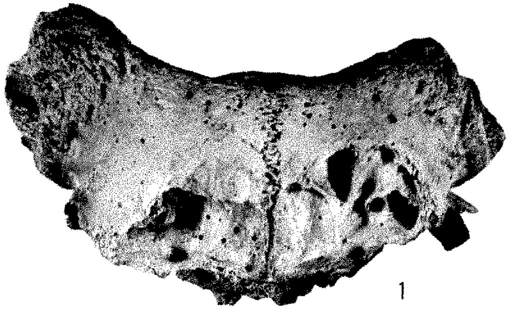


Fig. 3 - *Ovis vignei* from Shahr-i Sokhta.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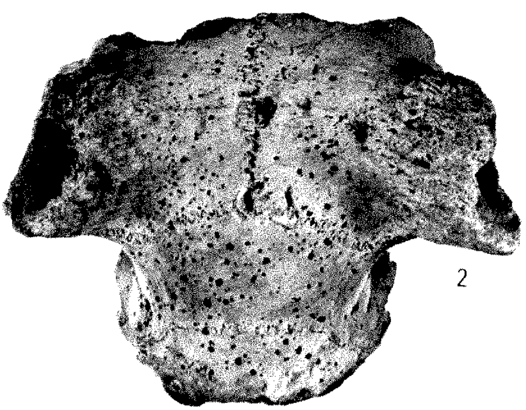
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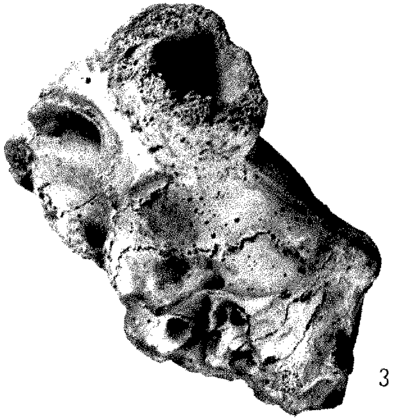
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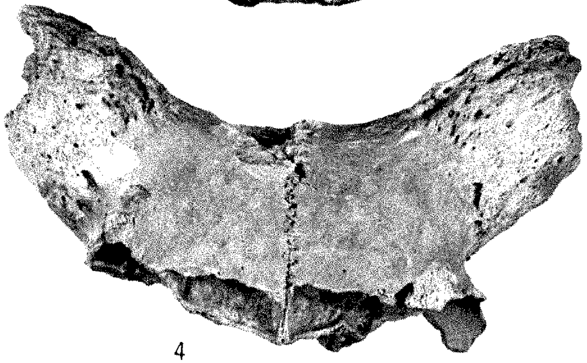
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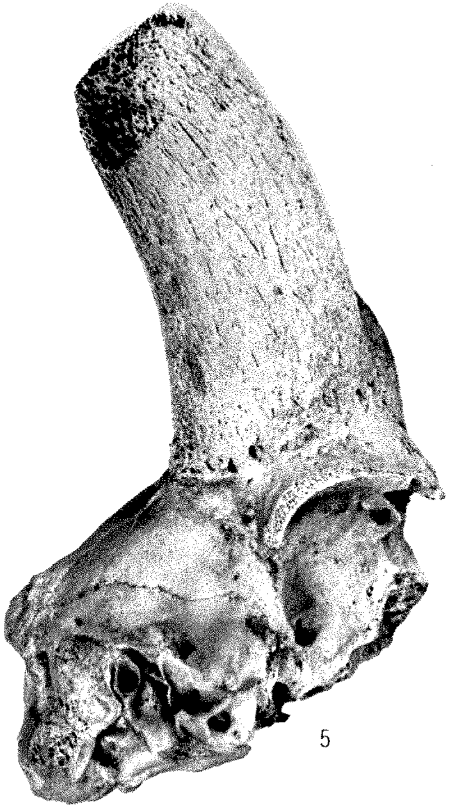
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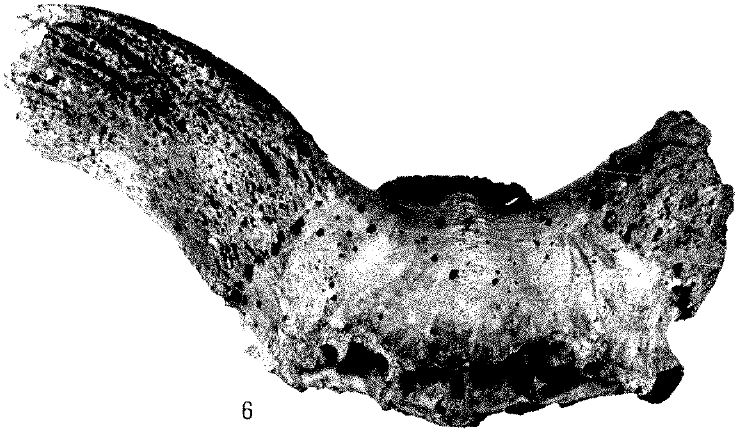
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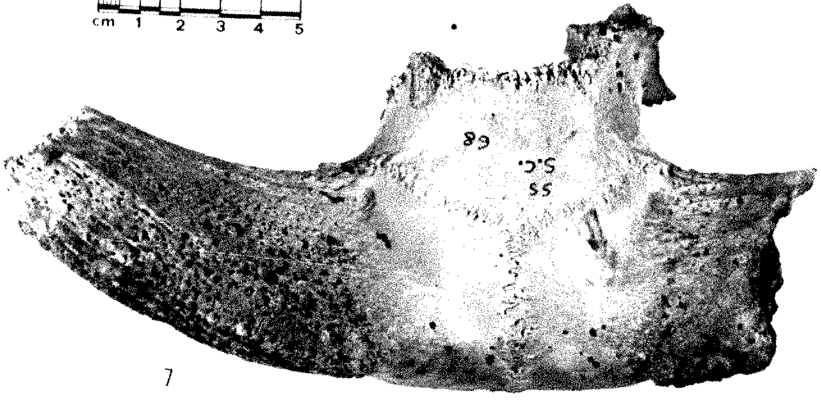

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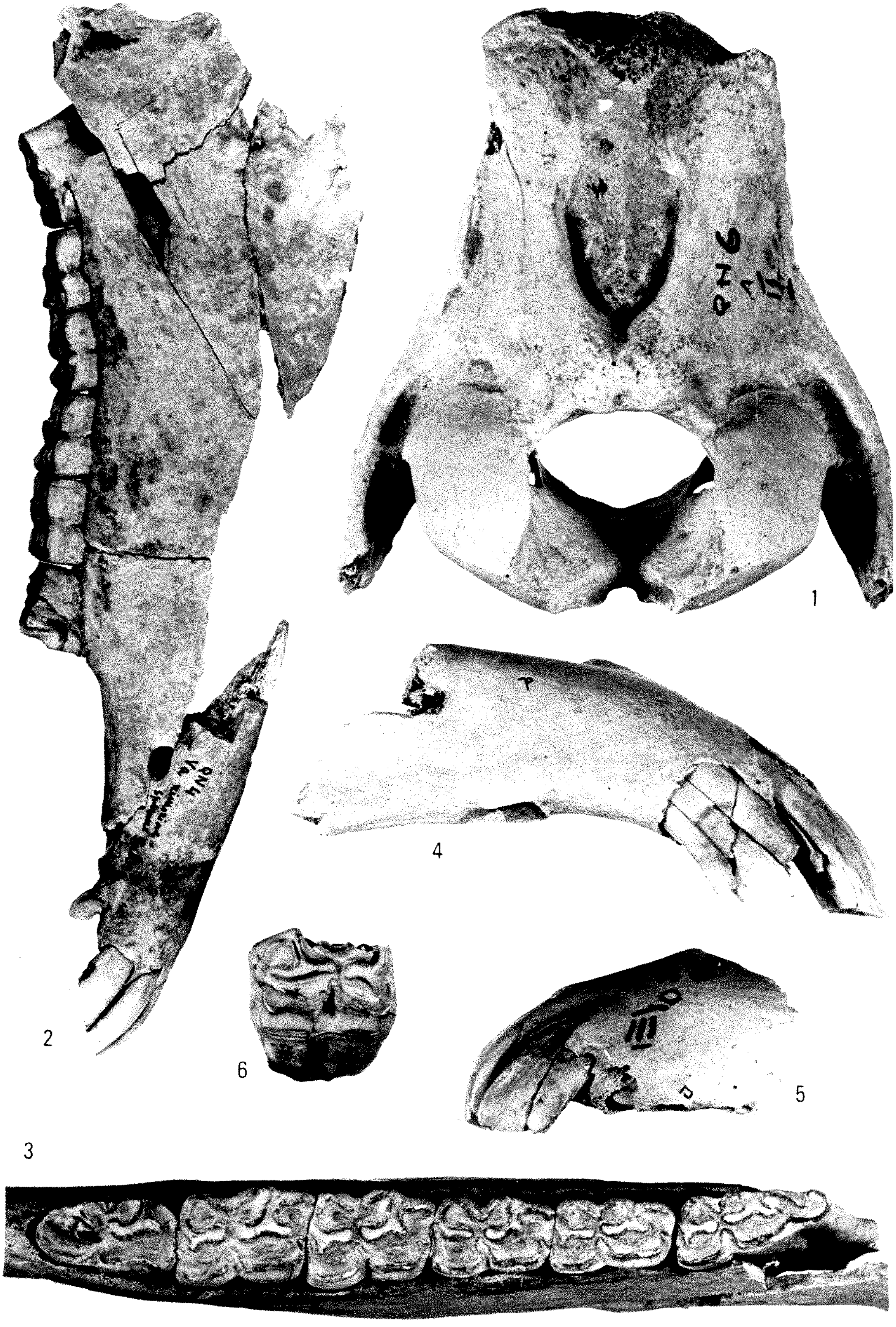


Fig. 1 - *1*: occipital (QN6, A II) of ass or half-ass; *2, 3*: lower jaw (QN4, Va) of half-ass; *4*: intermaxilla (QN6, F II) of horse; *5*: intermaxilla (QN6, O III) of ass; *6*: P_3 (QN3, B 3 III) of horse. (Fig. 1. 2 scale approx. 2:3; the others are close to natural size).

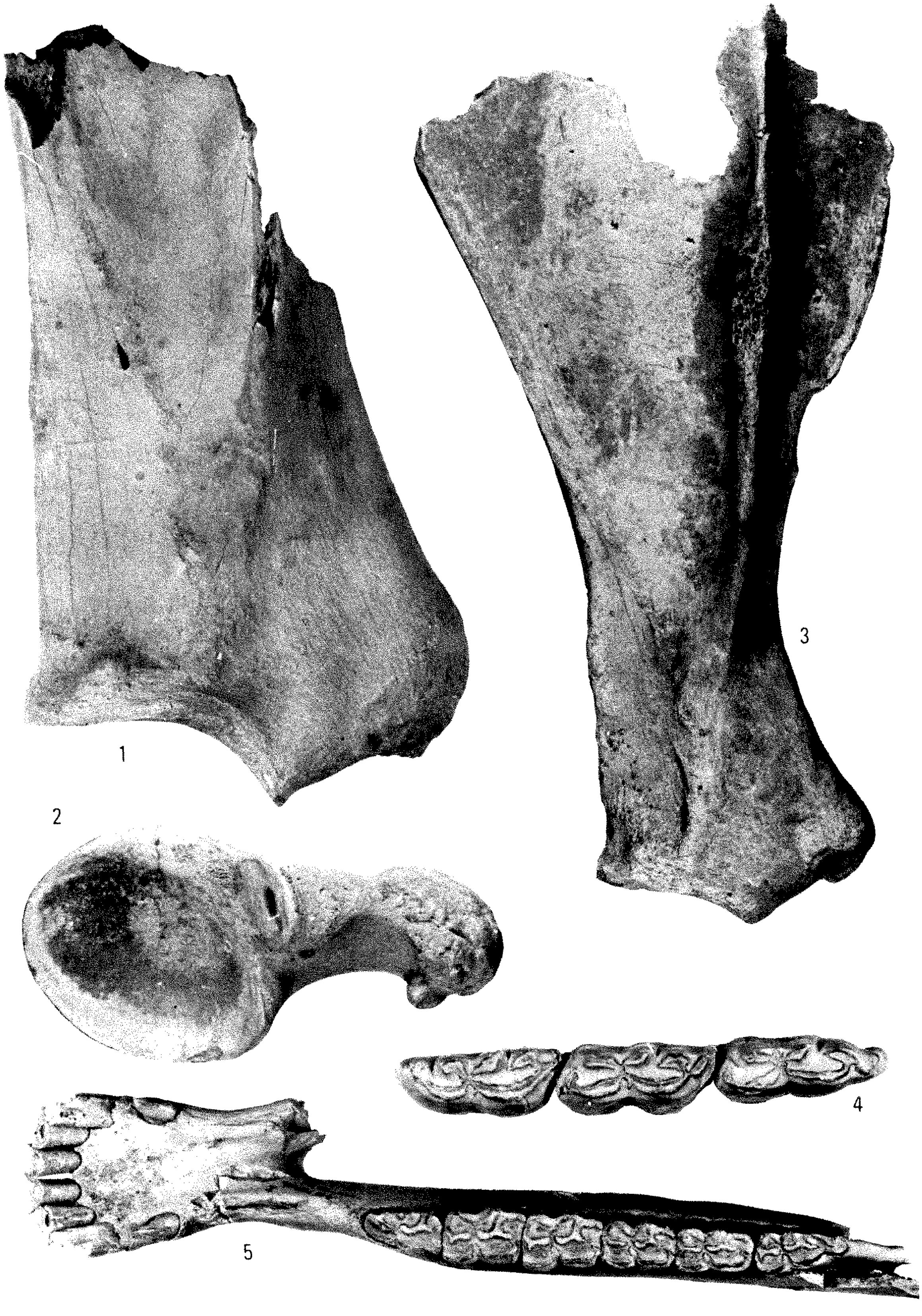


Fig. 2 - *1*, 2: scapula (QN, Va I) of ? horse; *3*: scapula (QN6, H) of ? half-ass; *4*: D_2, D_3 and (QN4, III) of ? ass; *5*: lower jaw (QN4, Va) of half-ass. (Fig. 2. 3, 5 slightly larger than half-s the others are approx. four-fifths natural size).

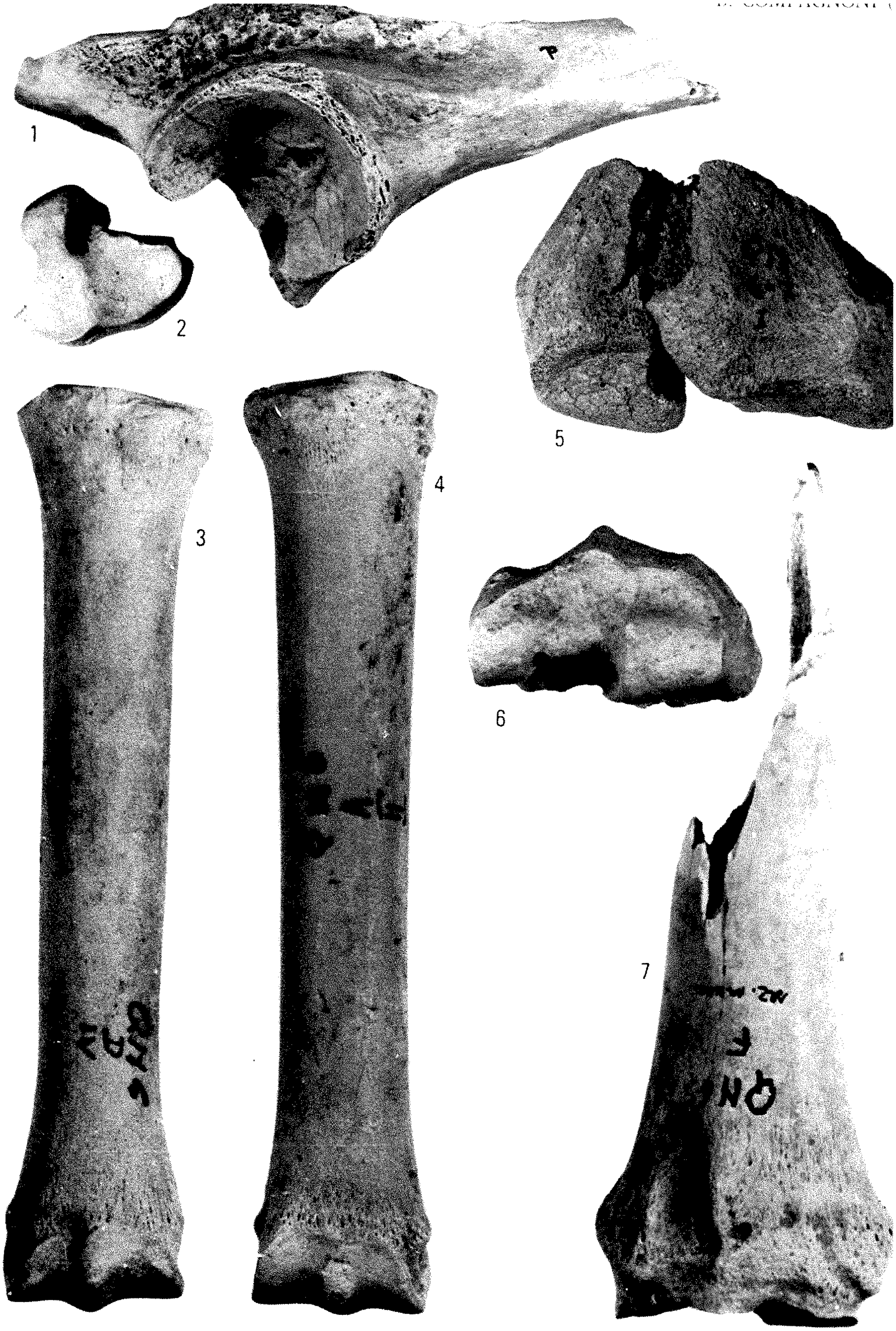


Fig. 3 - *1*: pelvis (QN6, *sud* III) of ass; *2, 3*: capitatum and 3rd metacarpus (QN6, D IV) of ass; *4*: 3rd metacarpus (QN6, A II) of ass; *5*: radius (QN6-7, I) of horse; *6, 7*: radius (QN6, F) of ass. (All figures are close to natural size).

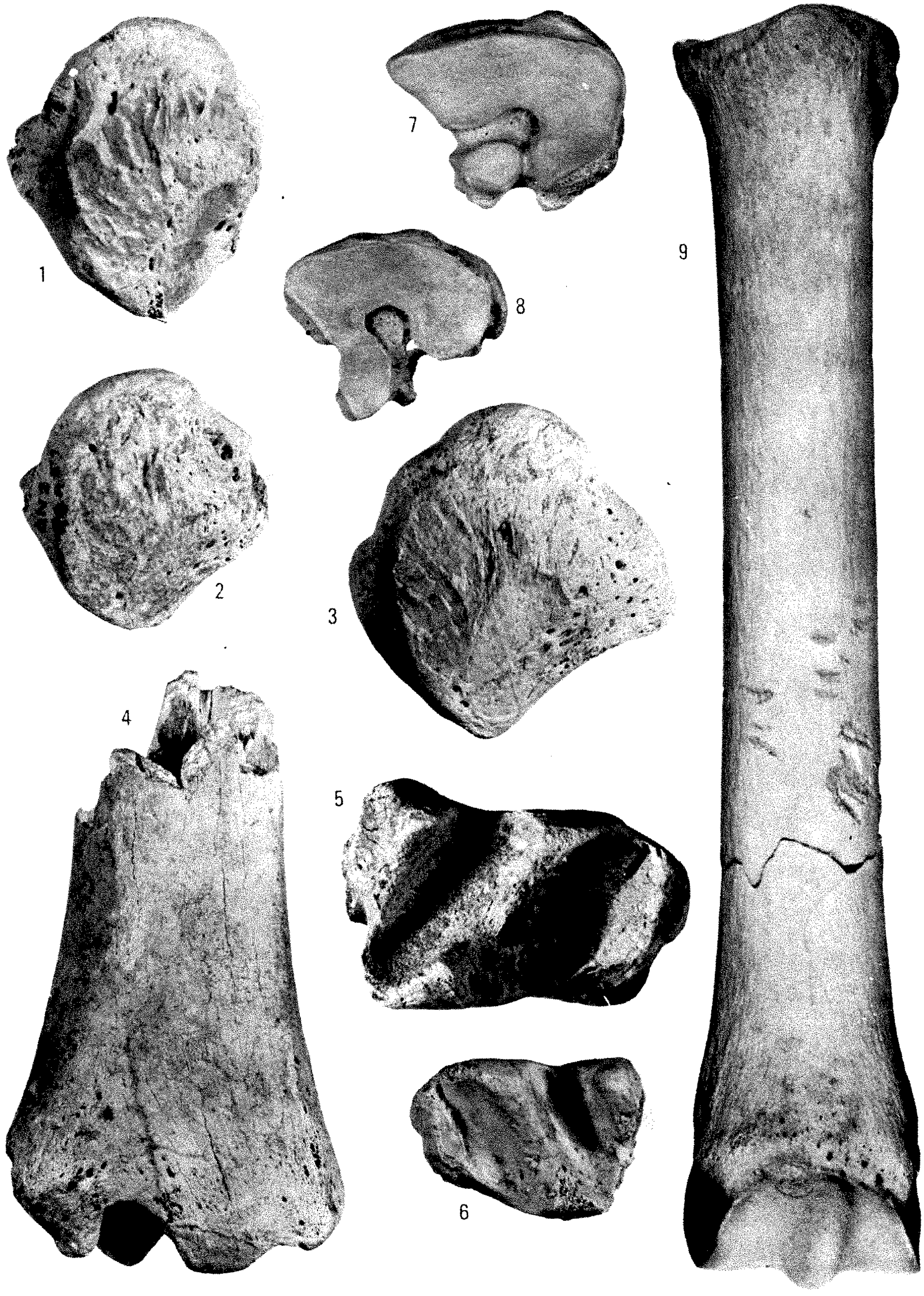


Fig. 4 - *1*: patella (QN6, B III) of half-ass; *2*: patella (QN2, 16 A I?) of ass; *3*: patella (QN6-7) of horse; *4, 5*: tibia (QN7, B I) of horse; *6*: tibia (QN16, I) of ass; *7, 8, 9*: navicular, large cuneiform and 3rd metatarsus (QN4, Va I) of horse. (All figures are approx. four-fifths natural size).

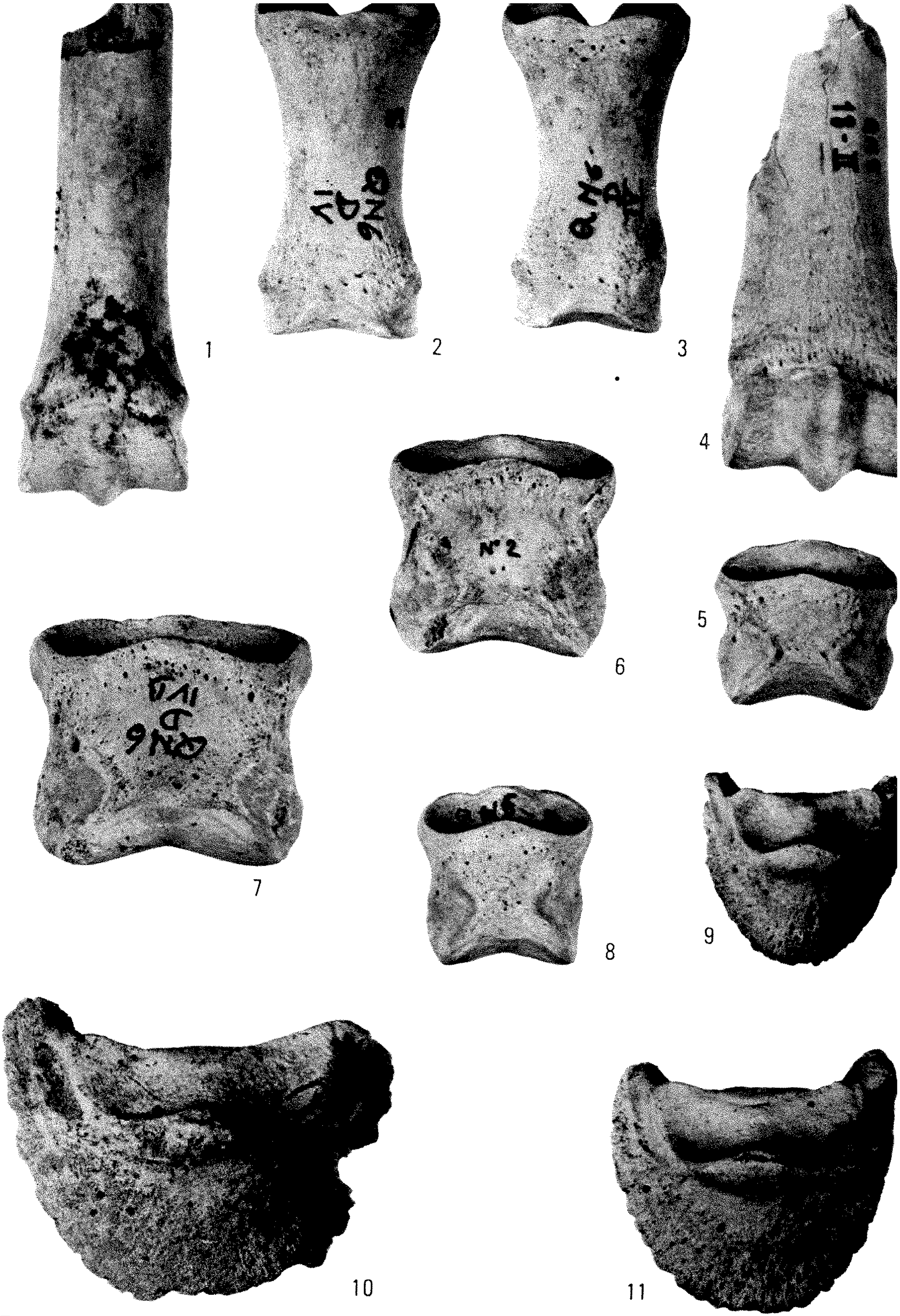


Fig. 5 - *1*: 3rd metatarsus (QN2, 16 B S) of ass; *2*: anterior 1st phalanx (QN6, D IV [1]) of ass; *3*: posterior 1st phalanx (QN6, D IV [2]) of ass; *4*: 3rd metatarsus (QN2, 18 II) of half-ass; *5*: ant. 2nd phalanx (QN4, IX 1) of ass; *6*: post. 2nd phalanx (QN6, D IV [2]) of half-ass; *7*: ant. 2nd phalanx (QN6, D IVB) of horse; *8*: post. 2nd phalanx (QN6, D IV [1]) of ass; *9*: 3rd phalanx (QN6, D IV) of ass; *10*: 3rd phalanx (QN16, I *sud*) of horse; *11*: 3rd phalanx (QN6, D IVB) of half-ass. (All

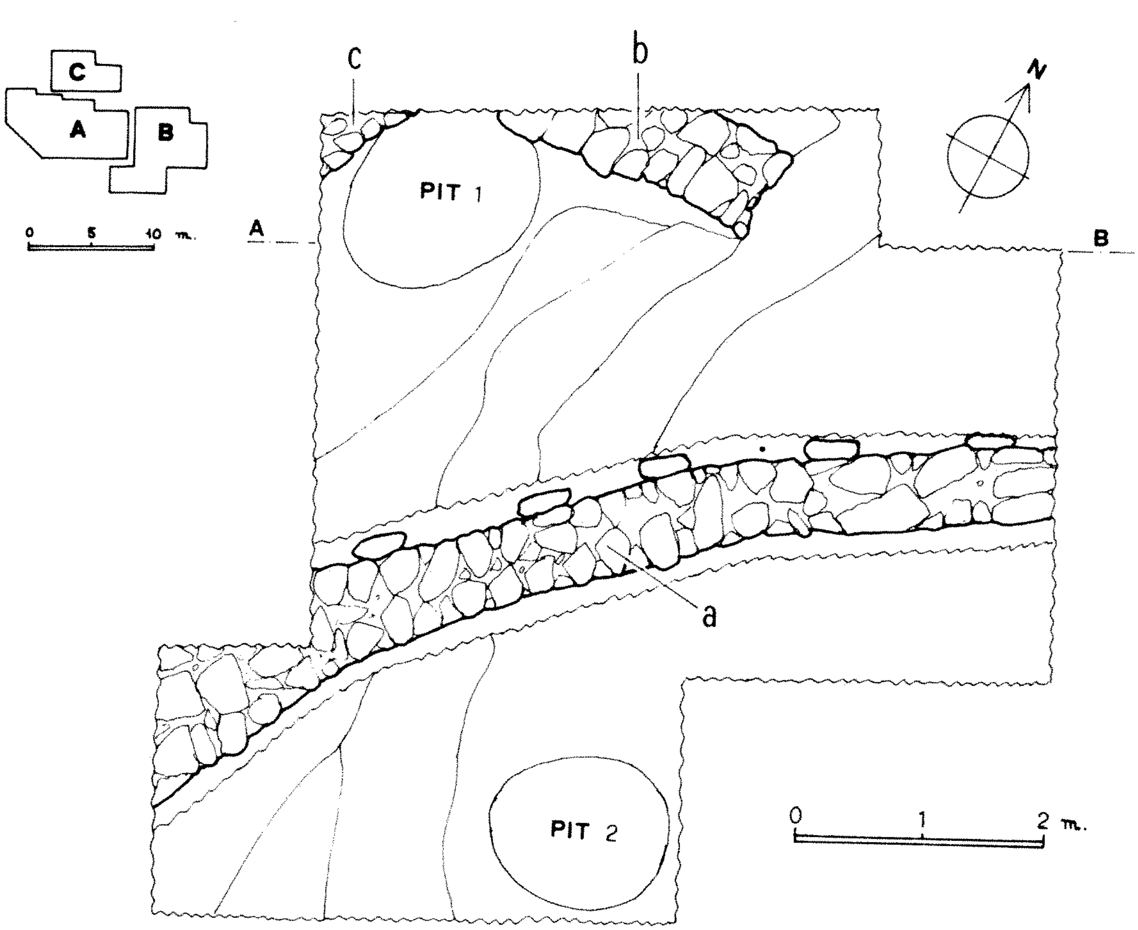


Fig. 1 - Bīr-kōṭ-ghuṇḍai. Plan of Area B and sketch map of Area A (1977 excavation), Area B and Are

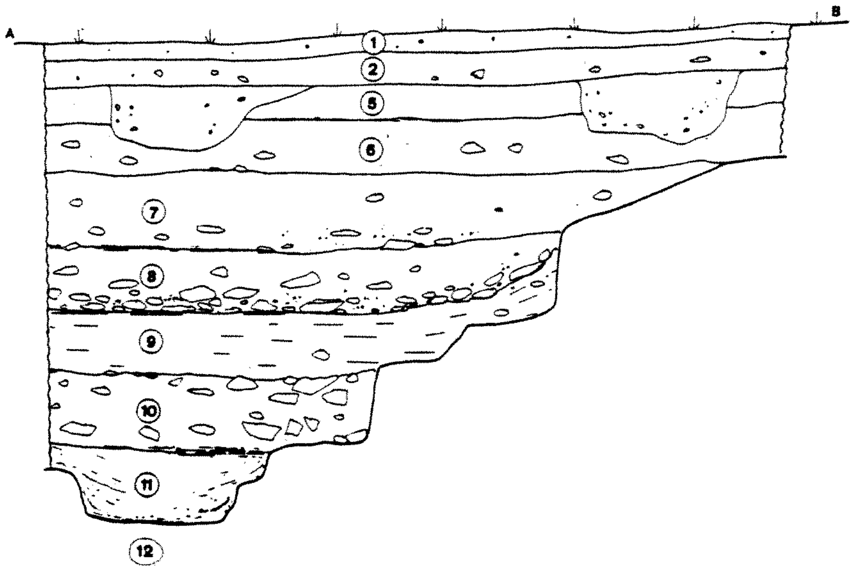


Fig. 2 - Bīr-kōṭ-ghuṇḍai. Section A-B of Area B.

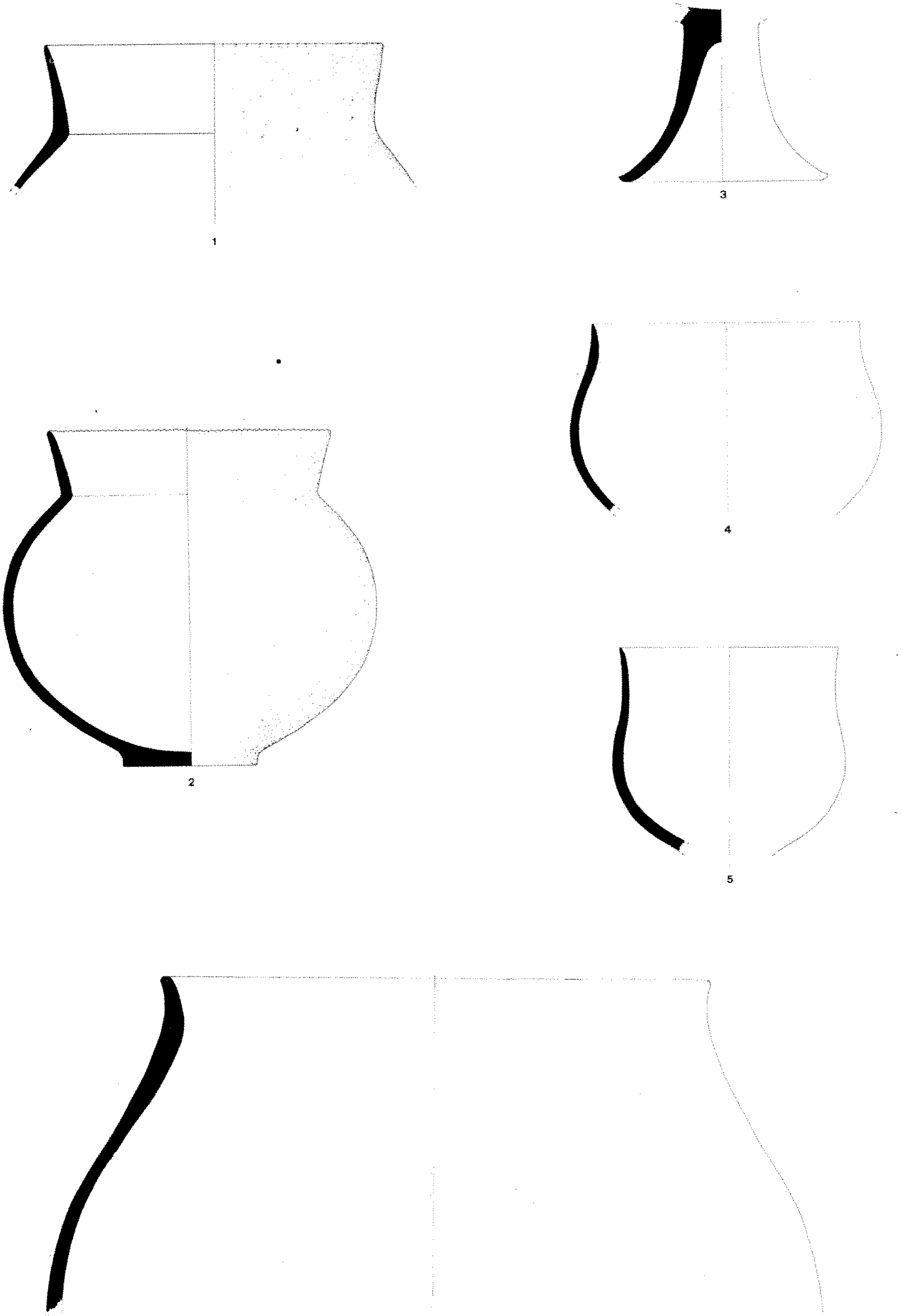


Fig. 3 - Pottery from Bīr-kōṭ-ghuṇḍai, layers ⑪ (fig. 3.1) and ⑩ (fig. 3.2-6). Brown gritty ware: fig. fig. 3.2, Inv. no. BKG 316. Black-grey burnished ware: fig. 3.3-6. Scale 1:4.

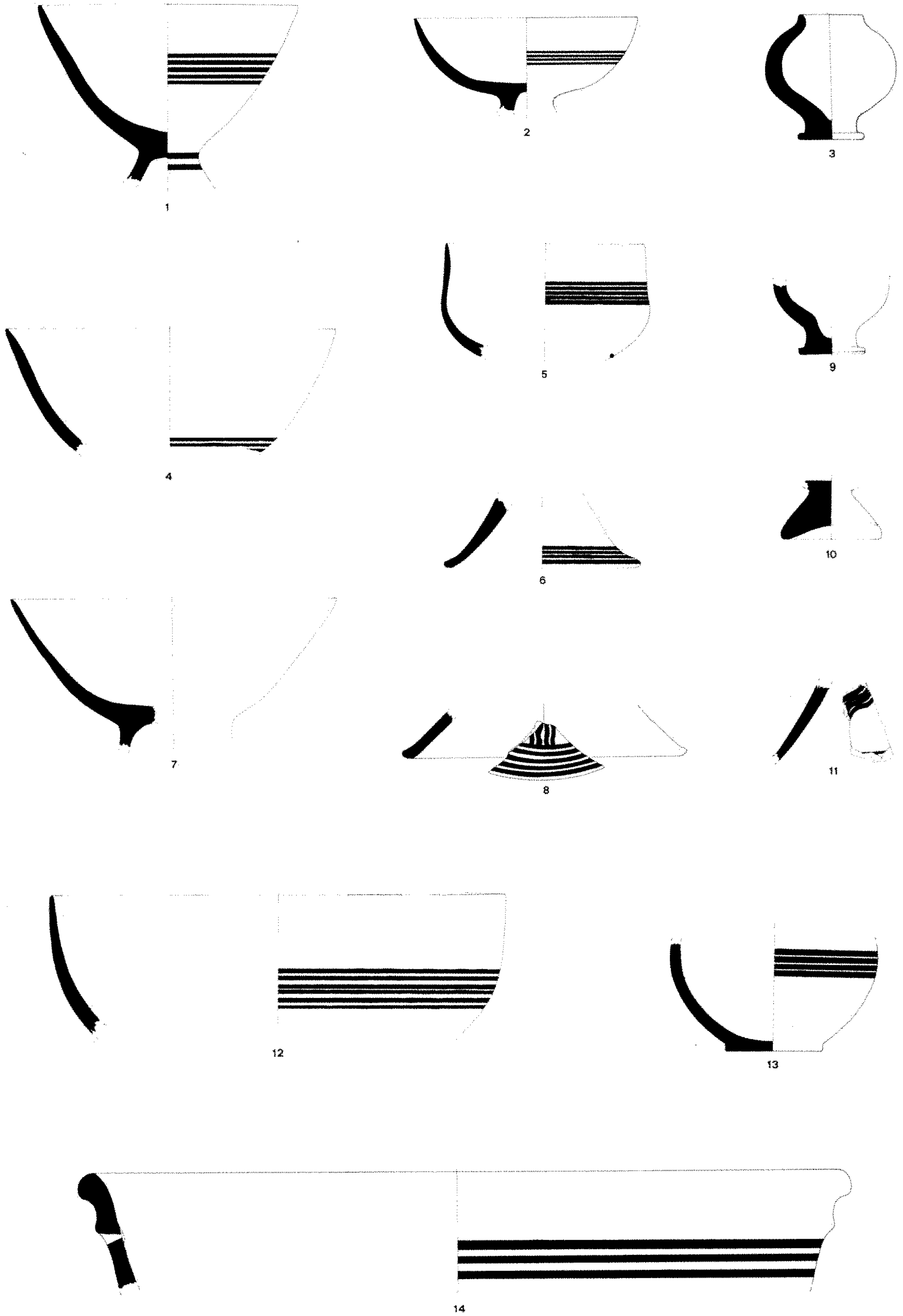


Fig. 4 - Red and black-on-red pottery from Bīr-kōṭ-ghuṇḍai, layers ⑪ (fig. 4.1,2,4,7,8,13) and ⑩ (fig. 4 5,6,9-12,14). Fig. 4.2, Inv. no. BKG 296 (= fig. 18). Fig. 4.3, Inv. no. BKG 278. Scale 1:4.

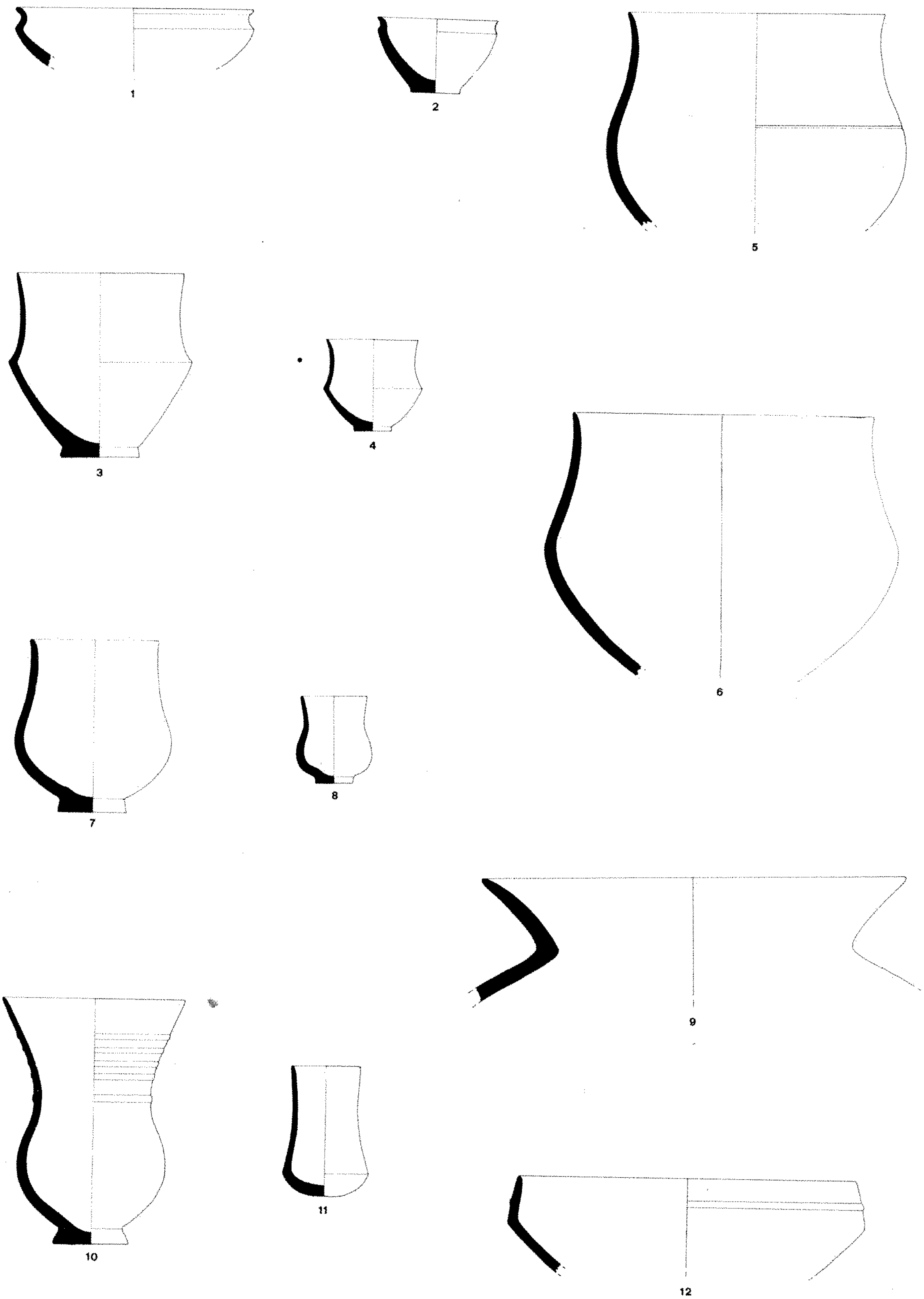


Fig. 5 - Pottery from Bīr-kōṭ-ghuṇḍai, layers ⑧ (fig. 5.1-6), ⑦ (fig. 5.7,8,10), ⑥ (fig. 5.9) and ④ (5.11,12). Buff-burnished ware: fig. 5.1; fig. 5.2, Inv. no. BKG 172 (= fig. 19). Grey-metallic ware: fig. 5 Inv. no. BKG 178 (= fig. 21); fig. 5.4, Inv. no. BKG 174; fig. 5.5 (= fig. 20); fig. 5.6. Grey wa fig. 5.7; fig. 5.8, Inv. no. BKG 214; fig. 5.10, Inv. no. BKG 212; fig. 5.11, Inv. no. BKG 168. R ware: fig. 5.9,12. Scale 1:4.

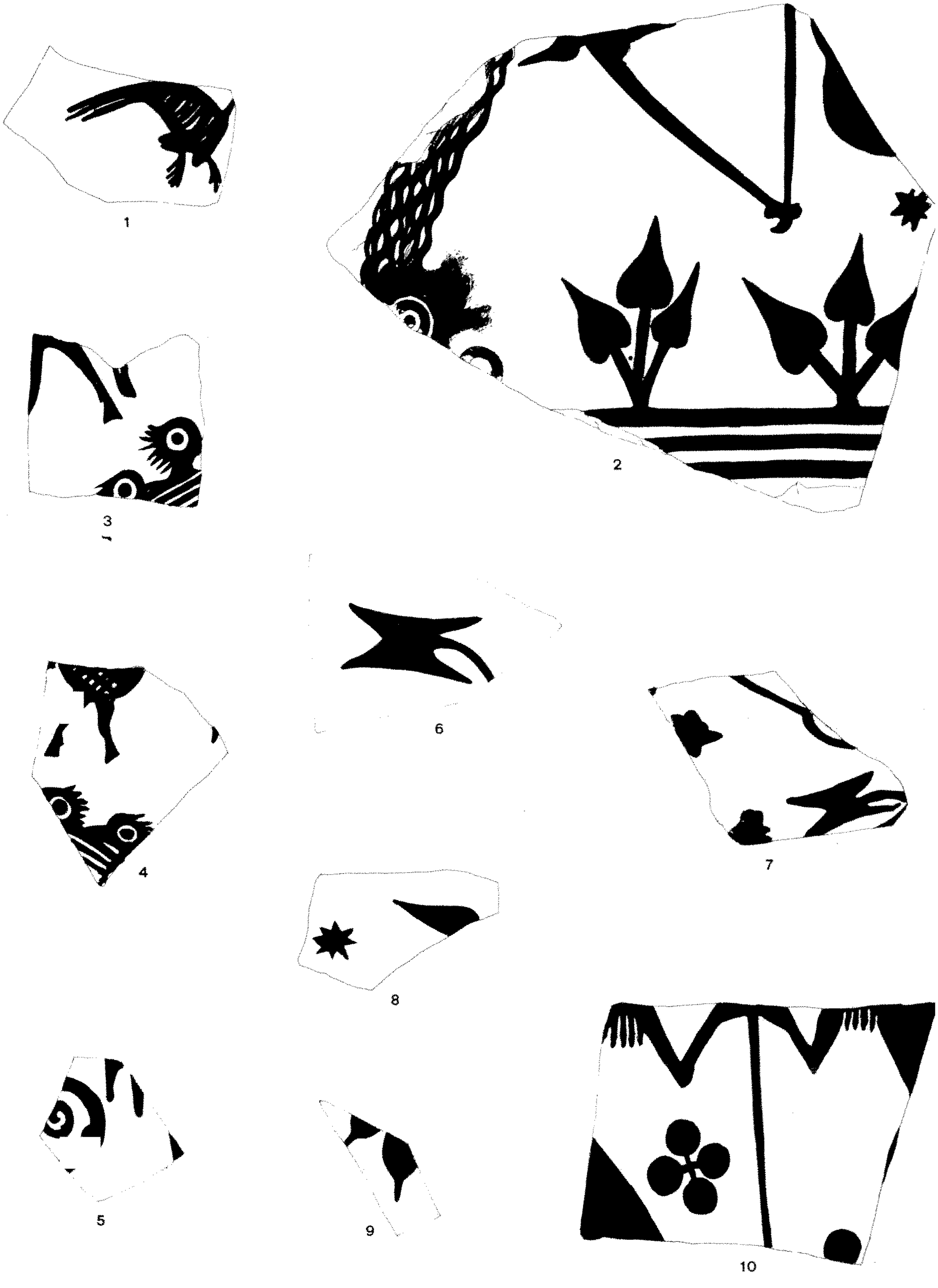


Fig. 6 - Painted pottery from Bīr-kōṭ-ghuṇḍai, layers ⑪ (fig. 6.2-4,10) and ⑩ (fig. 6.1, 5-9). Black-on-re fig. 6.1-5, 7-10. Black-on-grey: fig. 6.6. Fig. 6.1, Inv. no. BKG 272 (= fig. 12); fig. 6.2, Inv. no. BK 344 (= 17); fig. 6.3, Inv. no. BKG 373 (= fig. 13); fig. 6.4, Inv. no. BKG 297 (= fig. 14); fig. 6. Inv. No. BKG 307; fig. 6.7, Inv. no. BKG 306 (= fig. 15); fig. 6.10, Inv. no. BKG 302 (= fig. 1 Scale 1:4.

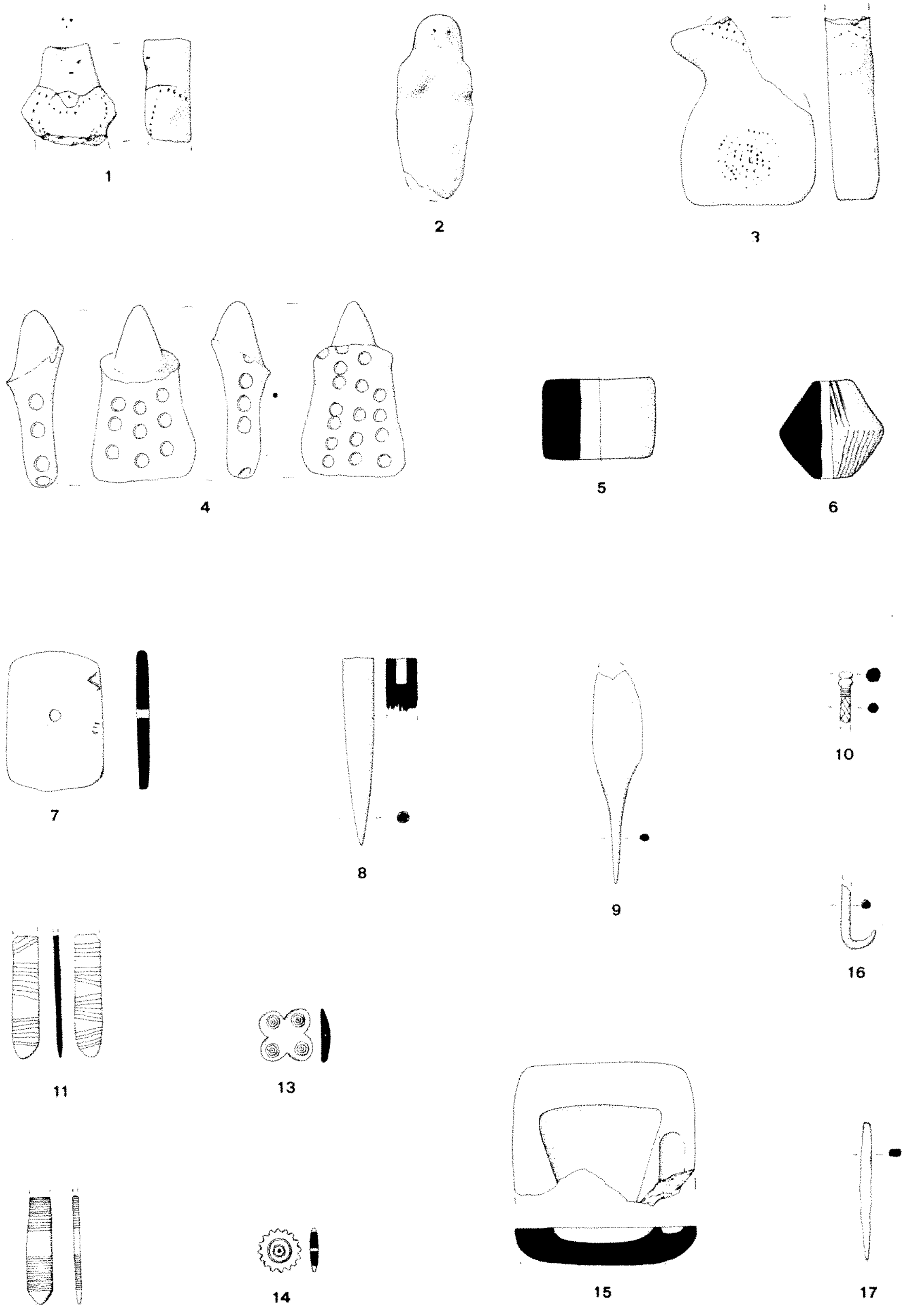


Fig. 7 - Miscellaneous objects from Bīr-kōṭ-ghuṇḍai, layers ⑪ (fig. 7.1,2,9,11-16), ⑩ (fig. 7.7,8,10), (
7.3-5), ⑦ (fig. 7.6,17). Terracotta: fig. 7.1-6; bone: fig. 7.7-11; "faience": fig. 7.13,14; stone: fig.
copper: fig. 7.16,17. Fig. 7.1, Inv. no. BKG 379 (= fig. 25); fig. 7.2, Inv. no. BKG 315; fig. 7.3, I
BKG 219 (= fig. 28); fig. 7.4, Inv. no. BKG 170 (= figs. 26, 27); fig. 7.5, Inv. no. BKG 213; f
Inv. no. BKG 331; fig. 7.7, Inv. no. BKG 282; fig. 7.8, Inv. no. BKG 340; fig. 7.9, Inv. no. BK
fig. 7.10, Inv. no. BKG 352; fig. 7.11, Inv. no. BKG 273; fig. 7.12, Inv. no. BKG 323; fig. 7.1
no. BKG 303 (= fig. 30); fig. 7.14, Inv. no. BKG 322; fig. 7.15, Inv. no. BKG 328; fig. 7.16, I
BKG 353; fig. 7.17, Inv. no BKG 194. Scale 1:2 (except fig. 7.14, scale 1:1).

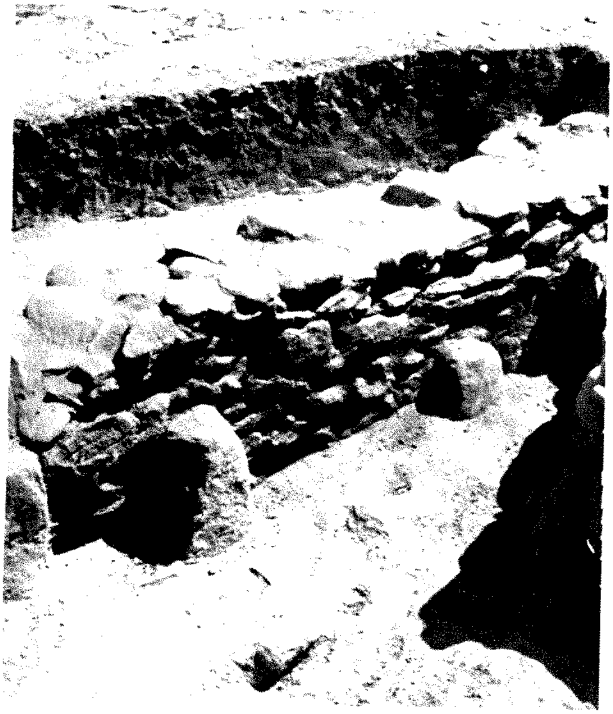


Fig. 8 - Bīr-kōṭ-ghuṇḍai, Area B. Wall *a* and floor-level at the bottom of layer ⑤ (Neg. no. Dep. CS 13355/8).

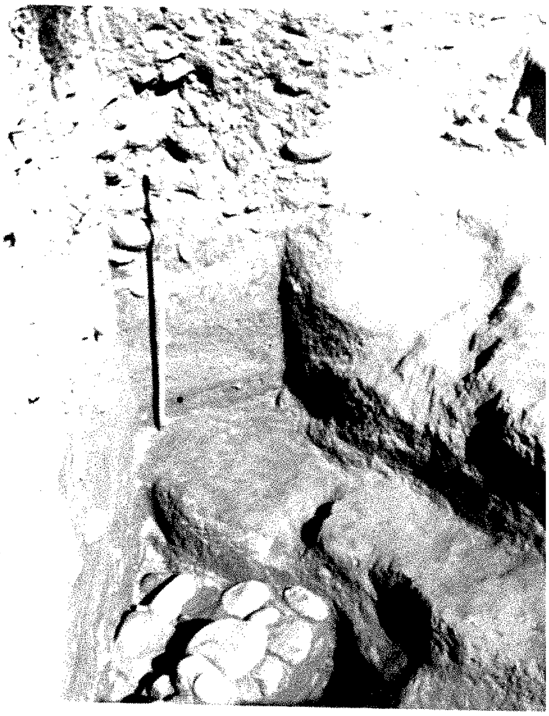


Fig. 9 - Bīr-kōṭ-ghuṇḍai, Area B. Stepped slope in layer ⑫ and remains of Wall *b* (Neg. no. CS 13358/7).

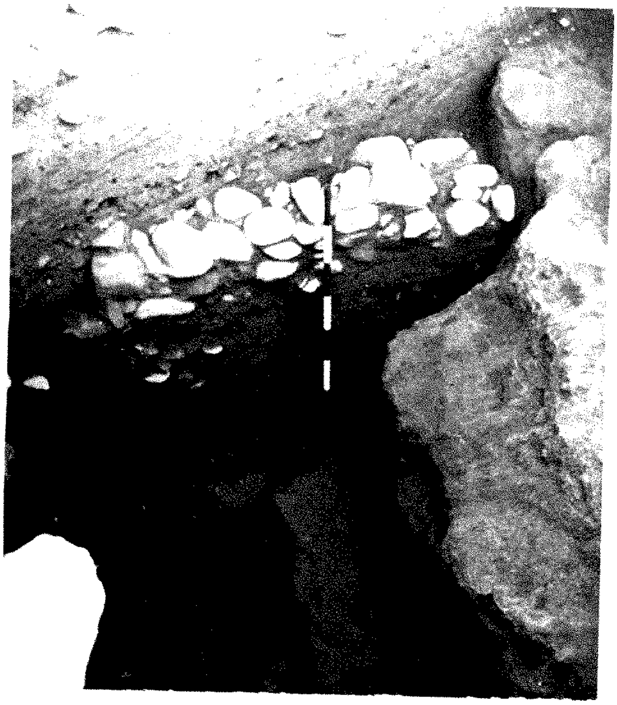


Fig. 10 - Bīr-kōṭ-ghuṇḍai, Area B. Stepped slope cut in layer ⑫ and remains of Wall *b* (Neg. no. Dep. CS 13358/10).

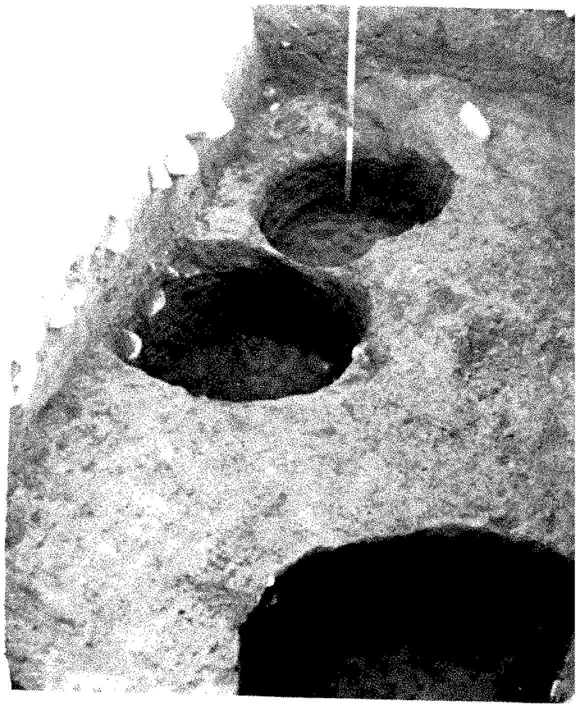


Fig. 11 - Bīr-kōṭ-ghuṇḍai, Area C. Floor-level at bottom of layer ⑦ and Pits cut in layer ⑧ (Neg. Dep. CS 13352/5).

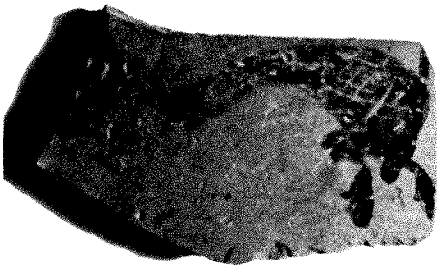


Fig. 12

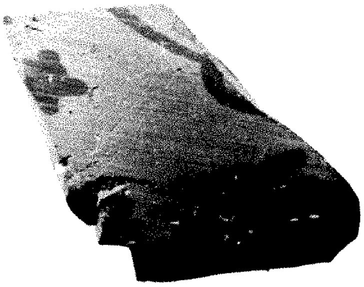


Fig. 15

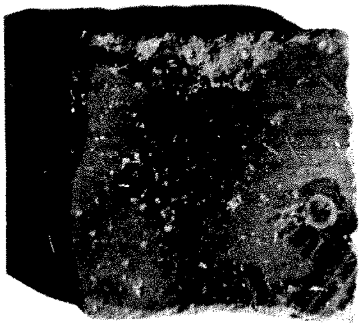


Fig. 13

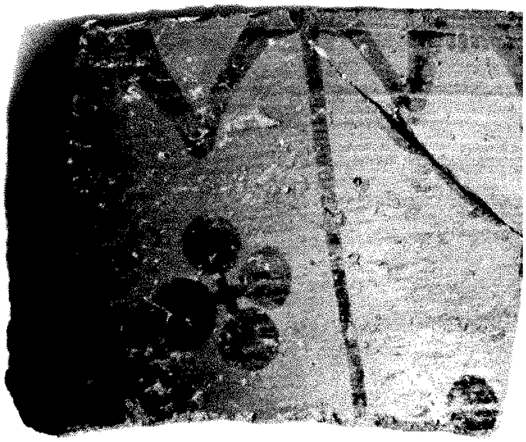


Fig. 16

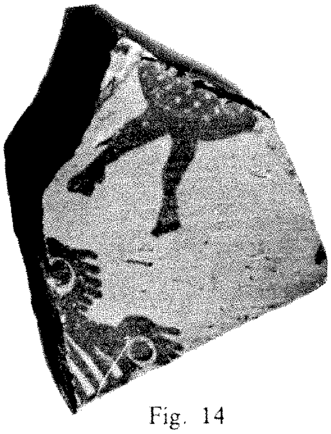


Fig. 14

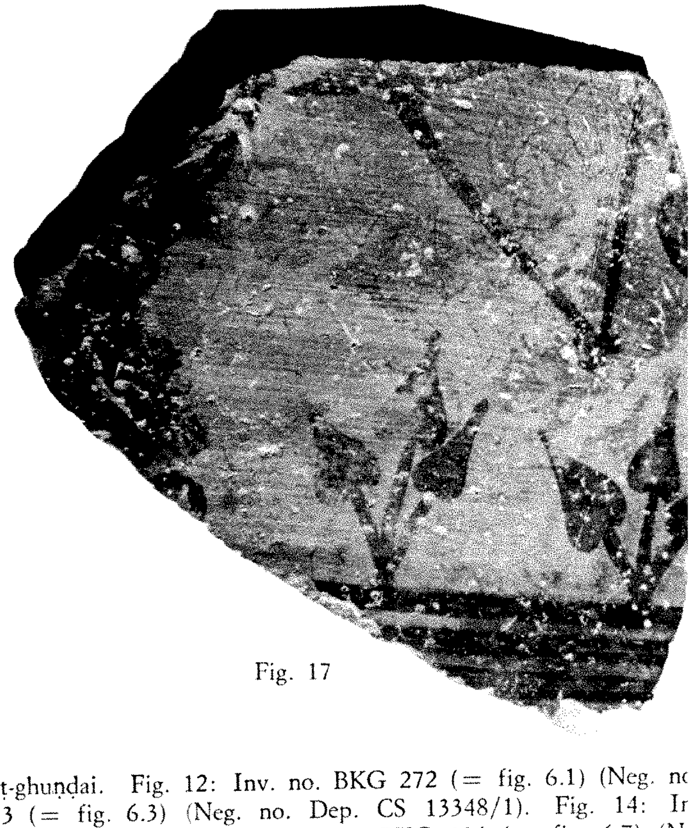


Fig. 17

Black-on-red painted pottery from Bīr-kōṭ-ghuṇḍai. Fig. 12: Inv. no. BKG 272 (= fig. 6.1) (Neg. n
CS 13346/2). Fig. 13: Inv. no. BKG 373 (= fig. 6.3) (Neg. no. Dep. CS 13348/1). Fig. 14: I
BKG 297 (= fig. 6.4) (Neg. no. Dep. CS 13344/3). Fig. 15: Inv. no. BKG 306 (= fig. 6.7) (N
Dep. CS 13344/1). Fig. 16: Inv. no. BKG 302 (= fig. 6.10) (Neg. no. Dep. CS 13347/2). Fi
Inv. no. BKG 344 (= fig. 6.2) (Neg. no. Dep. CS 13346/4).

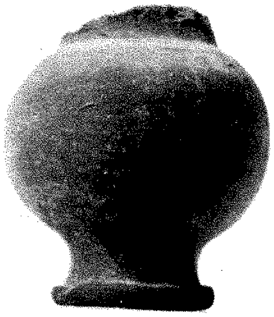


Fig. 18

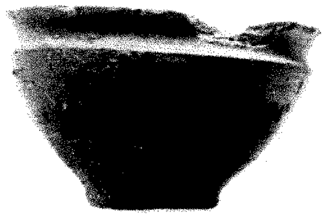


Fig. 19

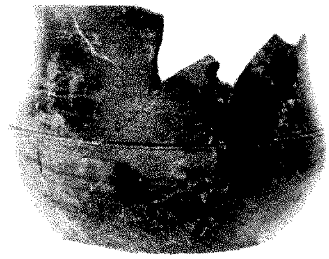


Fig. 20

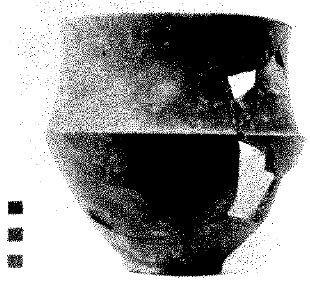


Fig. 21

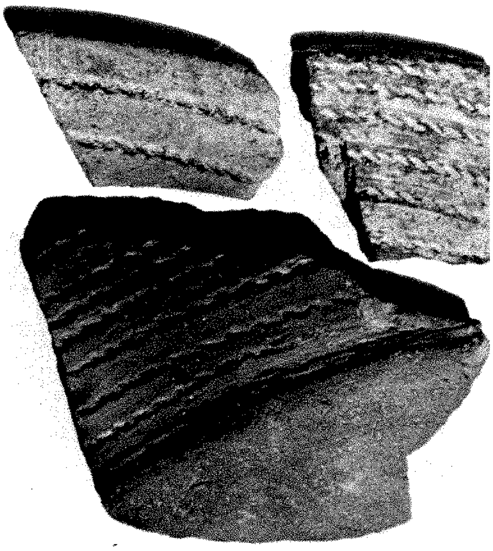


Fig. 22

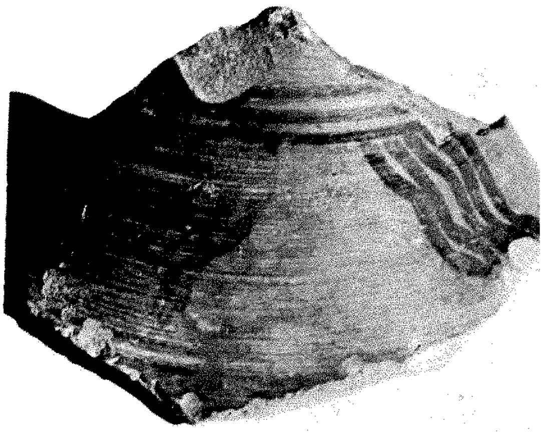


Fig. 23

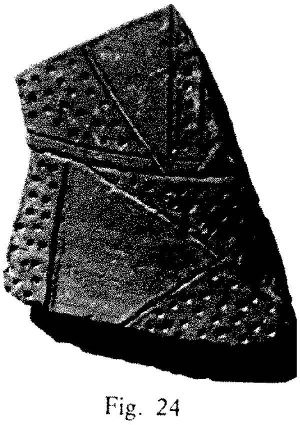


Fig. 24

Pottery from Bīr-kōṭ-ghuṇḍai, layers ⑪ (fig. 18), ⑩ (figs. 22, 23), ⑧ (figs. 19-21) and ⑦ (fig. 24). F 18: Inv. no. BKG 296 (= fig. 4.2) (Neg. no. Dep. CS 13354/12). Fig. 19: Inv. no. BKG 172 (= f 5.2) (Neg. no. Dep. CS 13354/3). Fig. 20 (= fig. 5.5) (Neg. no. Dep. CS 13349/1). Fig. 21: Inv. n BKG 178 (= fig. 5.3) (Neg. no. Dep. CS 13353/11). Fig. 22: Red ware (Neg. no. Dep. CS 13353/ Fig. 23: Black-on-red ware, Inv. no. BKG 276 (Neg. no. Dep. CS 13348/12). Fig. 24: Gray ware, In no. BKG 338 (Neg. no. 13347/9).

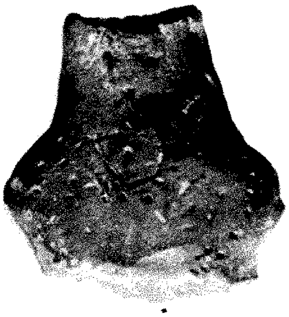


Fig. 25

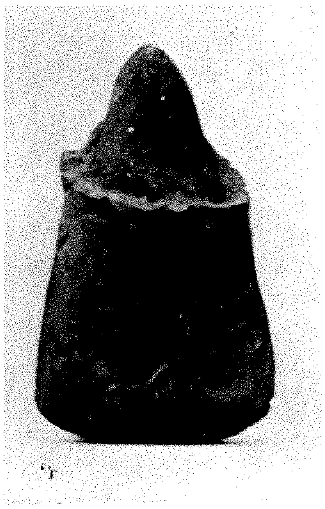


Fig. 26

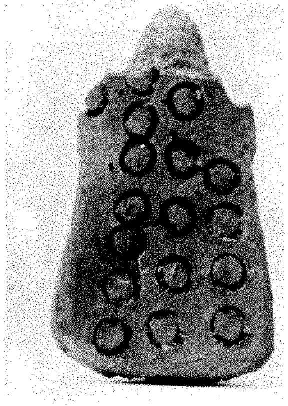


Fig. 27

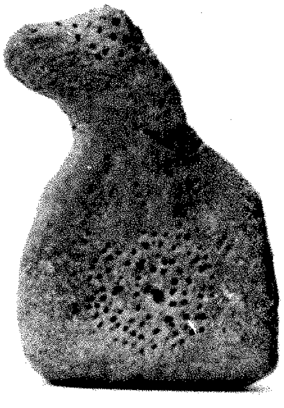


Fig. 28

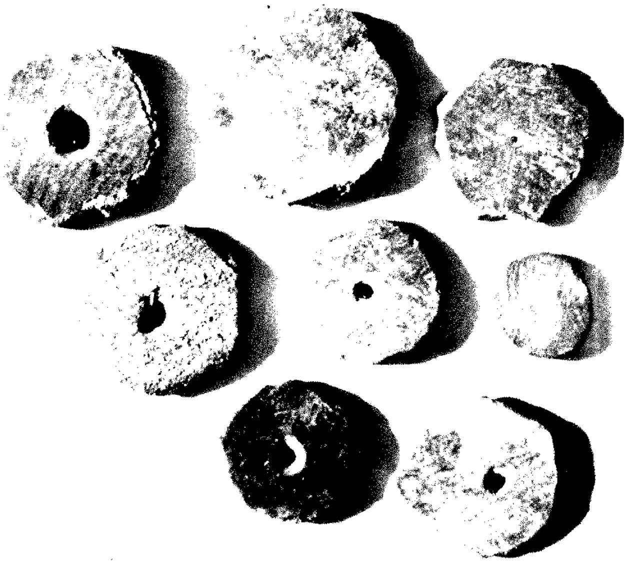


Fig. 29

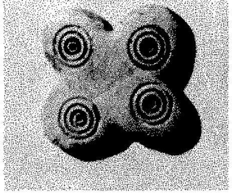


Fig. 30

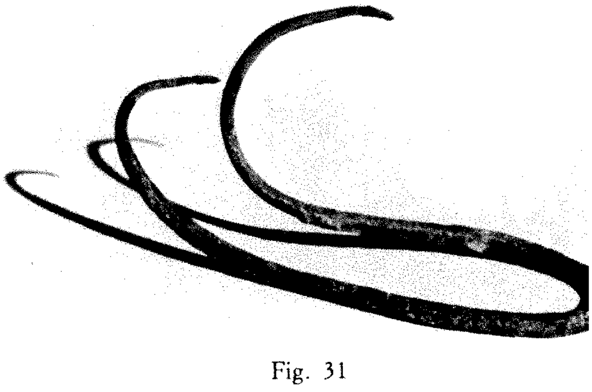


Fig. 31

Miscellaneous objects from Bīr-kōṭ-ghuṇḍai, layers ⑪ (figs. 25, 30), ⑪ and ⑩ (fig. 29), ⑧ (figs. 26- ⑥ (fig. 31). Terracotta: figs. 25-29; "faience": fig. 30; copper: fig. 31. Fig. 25: Inv. no. BKG 379 (= 7.1) (Neg. no. Dep. CS 13659/5). Figs. 26, 27: Inv. no. BKG 170 (= fig. 7.4) (Neg. no. Dep. 13353/4 and 13346/12). Fig. 28: Inv. no. BKG 219 (= fig. 7.3) (Neg. no. Dep. CS 13353/4). Fig. (Neg. no. Dep. CS 13348/10). Fig. 30: Inv. no. BKG 303 (= fig. 7.13) (Neg. no. Dep. CS 13344/ Fig. 31: Inv. no. BKG 261 (Neg. no. Dep. CS 13346/6).

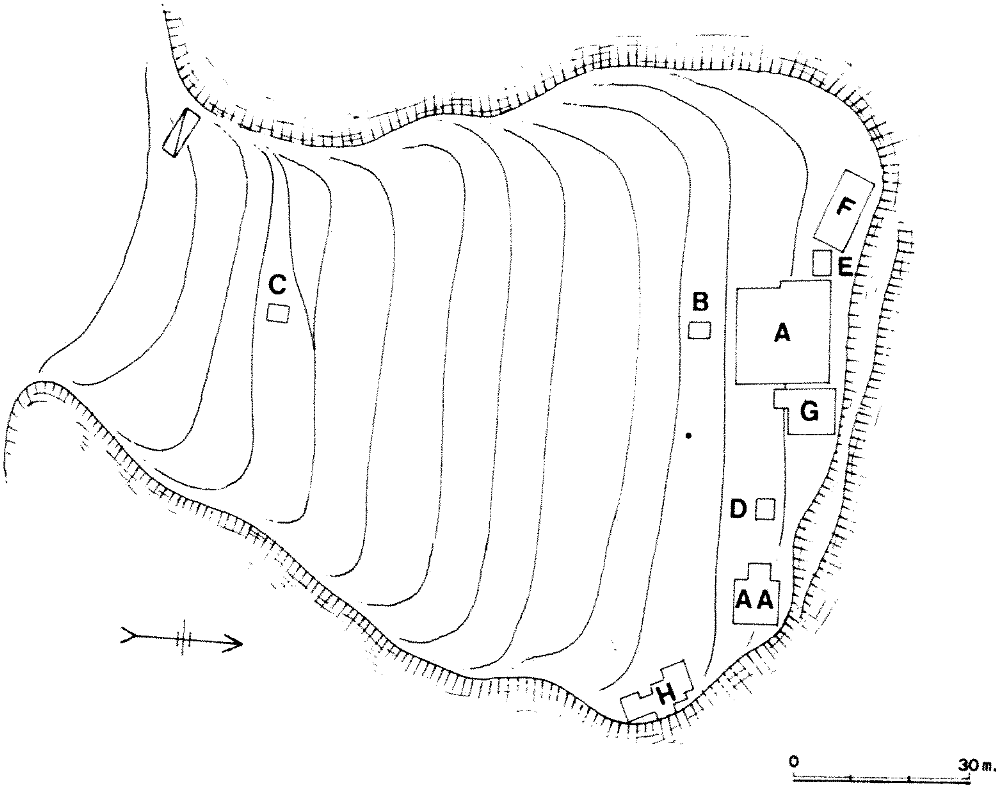


Fig. 1 - Sketch map of Loebanr III. Excavation of 1968 (area AA), 1976 (areas A-E) and 1979 (areas F-H).

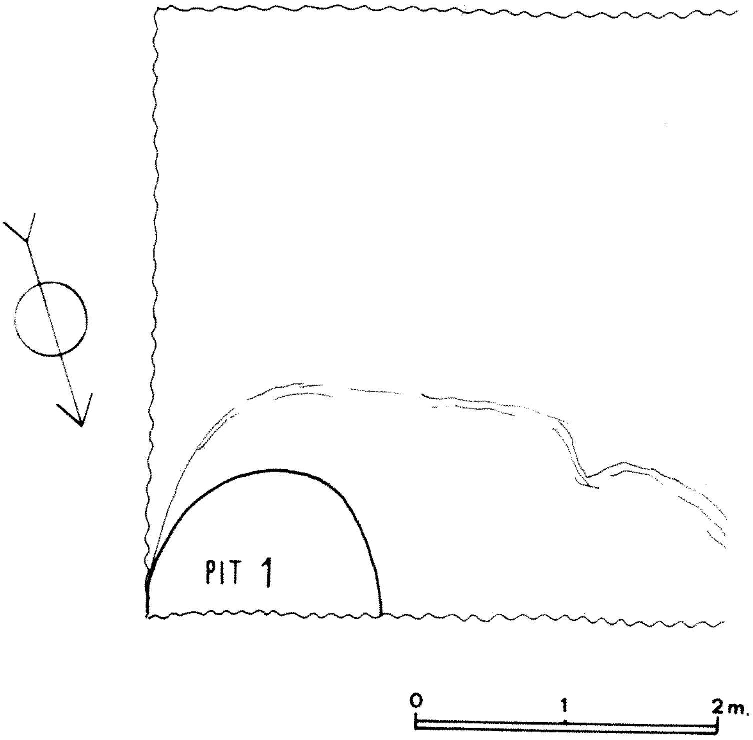


Fig. 2 - Loebanr III, Area F (eastern side). Plan of the pit.

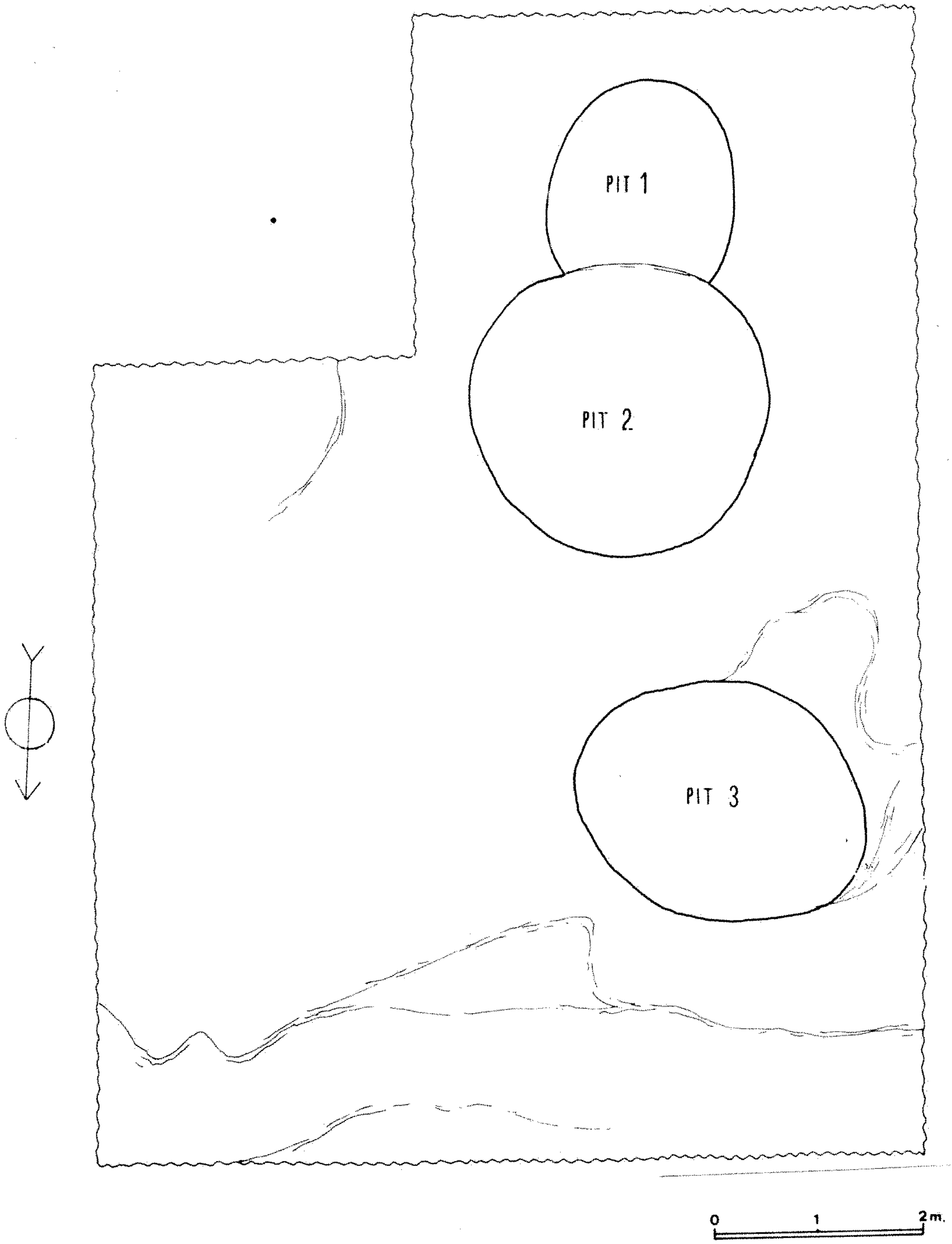


Fig. 3 - Loebanr III, Area G. Plan of the pits.

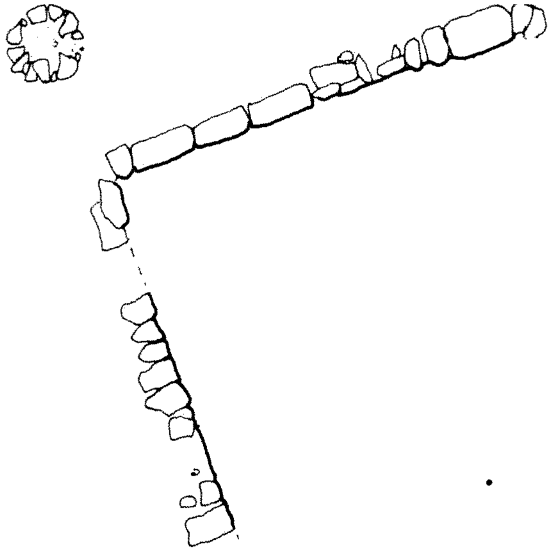


Fig. 4 - Loebanr III, Area H. Plan of the stone-walled structures. (Scale 1:50).

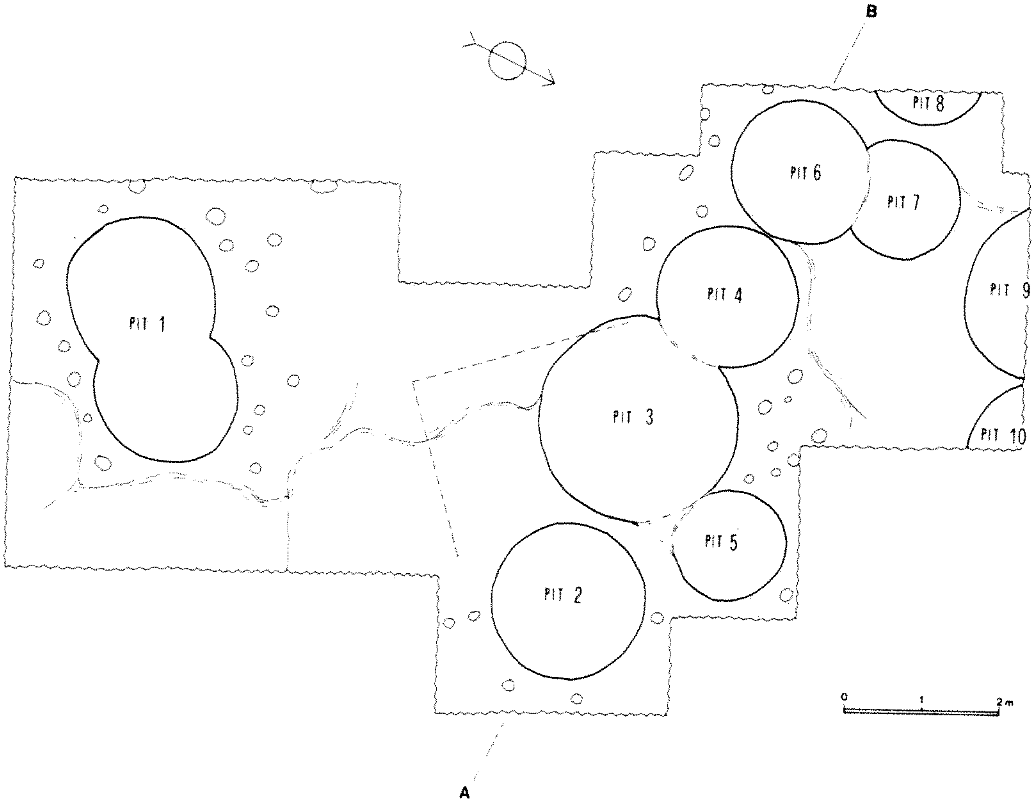


Fig. 5 - Loebanr III, Area H. Plan of the pits (the dashed line shows the position of the stone-walled structures).

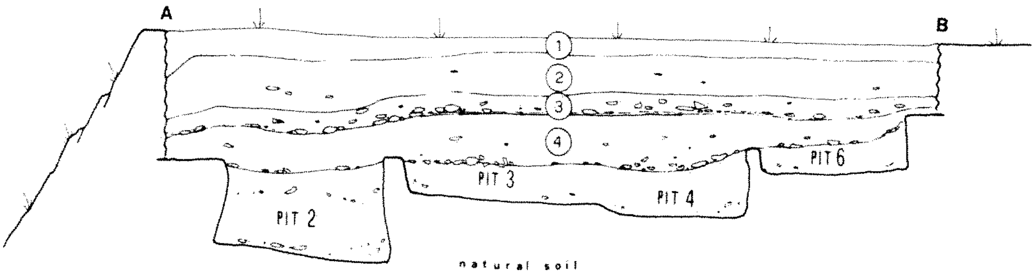


Fig. 6 - Loebanr III, Area H. Section through pits 2, 3, 4 and 6.

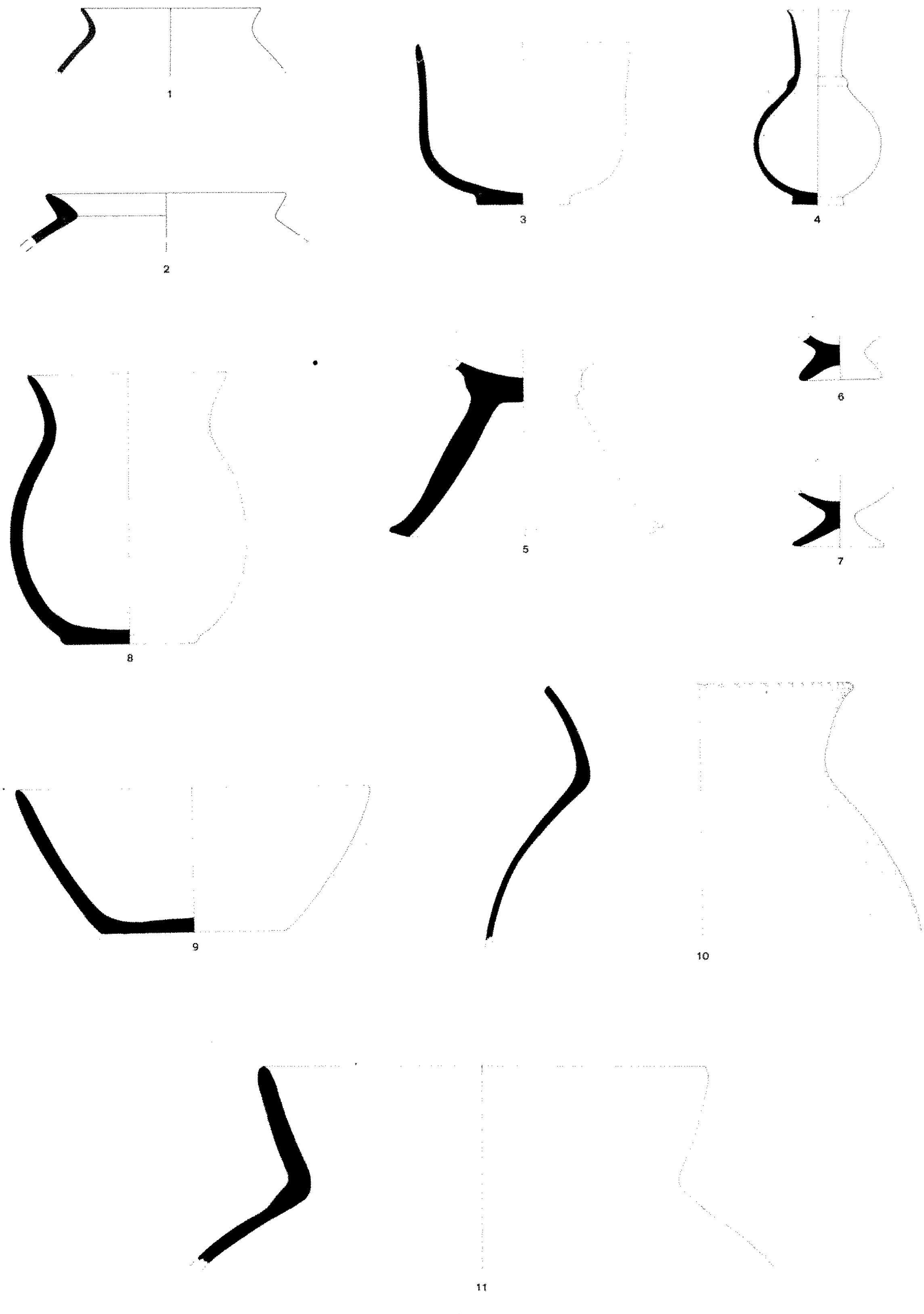


Fig. 7 - Pottery from Loebanr III. Gritty-Brown Ware: fig. 7.8,10; Black-Grey Burnished Ware: fig. 7.1-7,9,11. Fig. 7.1: from Area H, layer ③. Fig. 7.2: from Area H, layer ③. Fig. 7.3: Inv. no. LIII 179, from Area H, Pit 2. Fig. 7.4: Inv. no. LIII 161, from Area F, Pit 1. Fig. 7.5: from Area H, Pit 1. Fig. 7.6: from Area H, Pit 4. Fig. 7.7.: from Area H, Pit 2. Fig. 7.8: Inv. no. LIII 169, from Area H, Pit 3 (= fig. 17). Fig. 7.9: Inv. no. LIII 178, from Area H, Pit 2. Fig. 7.10: from Area F, Pit 1. Fig. 7.11: from Area H, layer ③. Scale 1:4

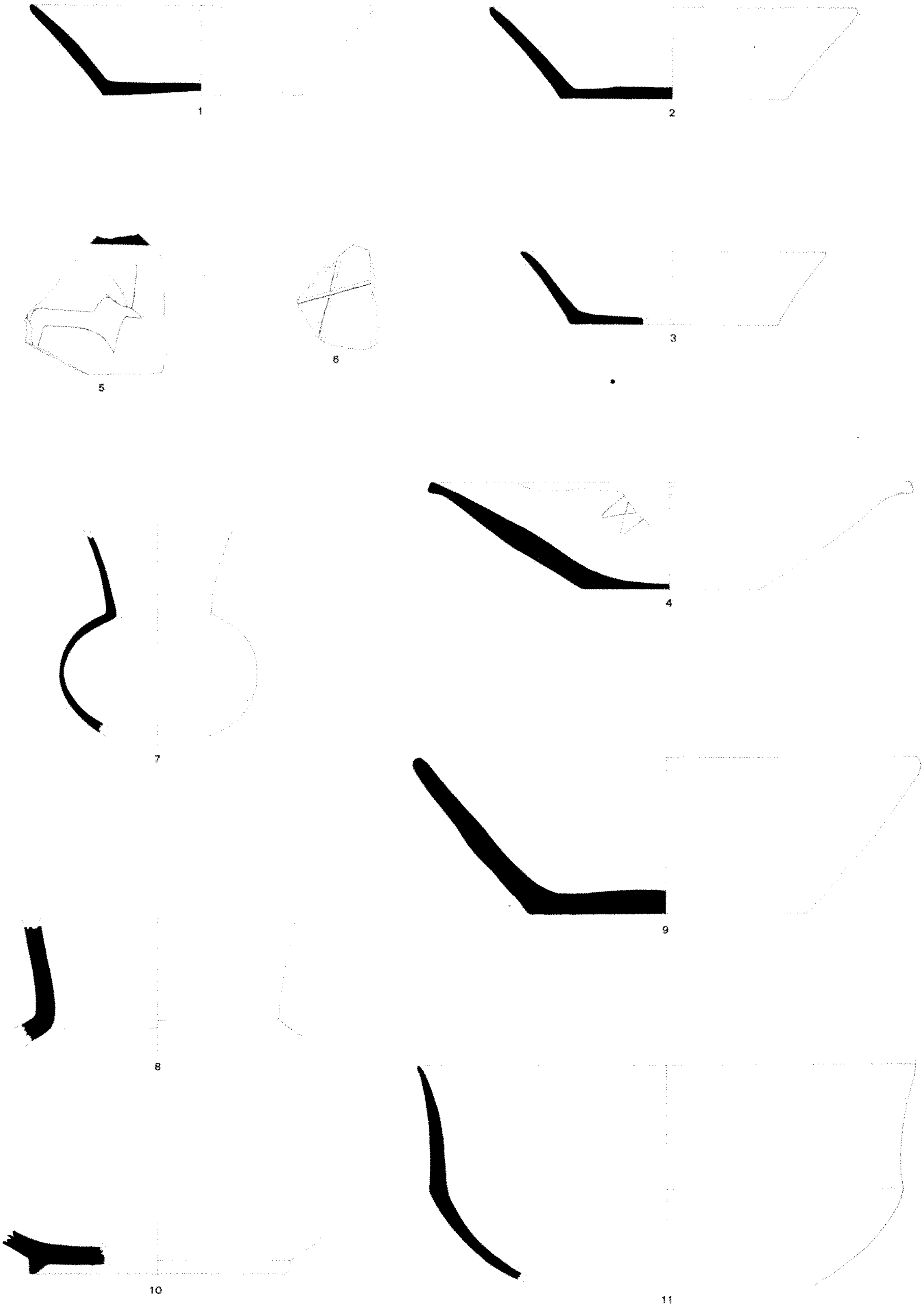


Fig. 8 - Red pottery from Loebanr III. Fig. 8.1: Inv. no. LIII 180, from Area H, Pit 7. Fig. 8.2: from Area H, layer ③. Fig. 8.3: from Area H, layer ③. Fig. 8.4: Inv. no. LIII 181, from Area H, Pit 4 (= fig. 18). Fig. 8.5: Inv. no. 170, from Area H, Pit 7. Fig. 8.6: from Area H, Pit 7. Fig. 8.7: from Area H, layer ③. Fig. 8.8: from Area H, layer ③. Fig. 8.9: from Area G, Pit 3. Fig. 8.10: from Area H, Pit 7. Fig. 8.11: from Area H, layer ③. Scale 1:4.

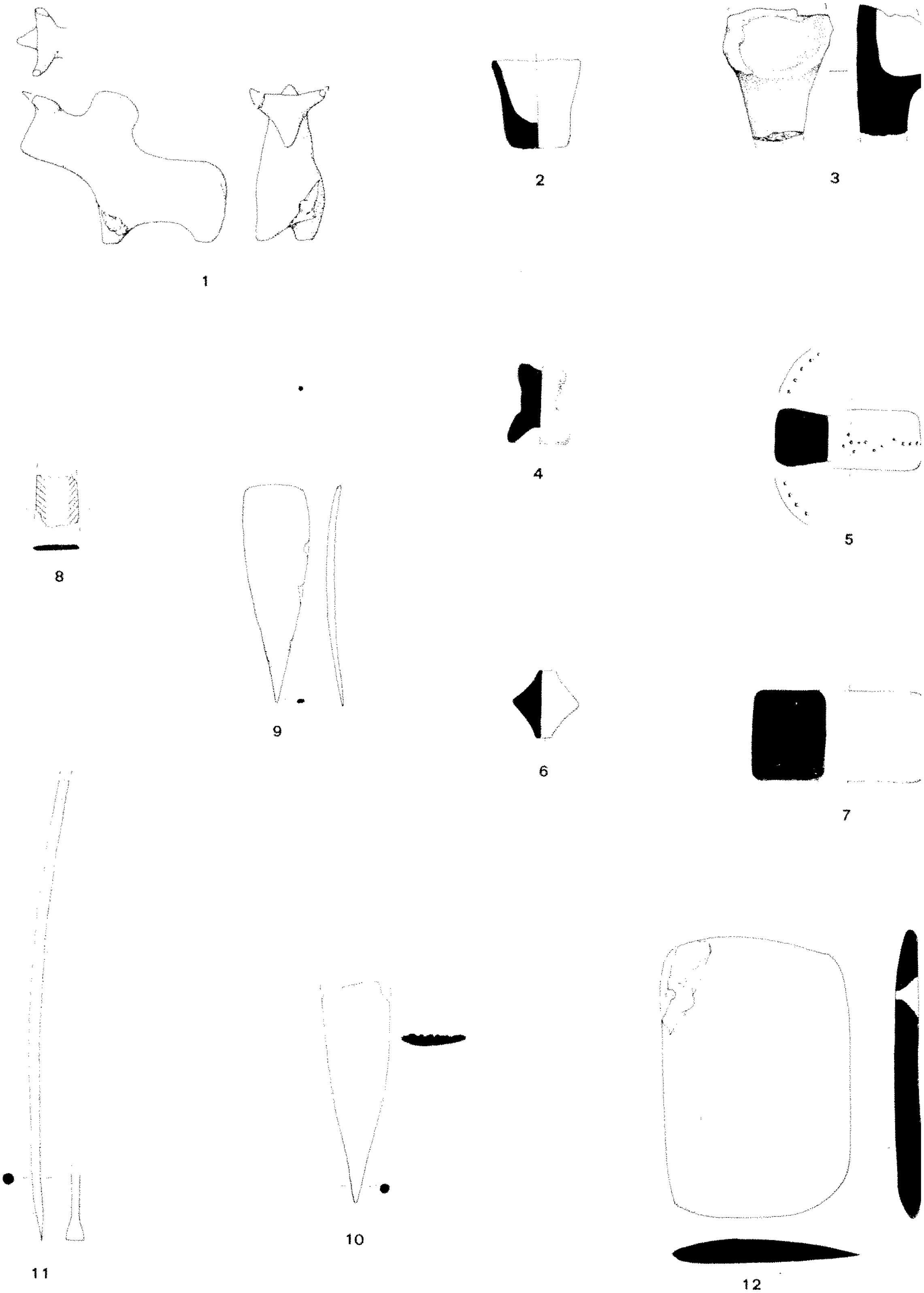


Fig. 9 - Miscellaneous objects from Loebanr III. Terracotta: fig. 9.1-7; bone: fig. 9.8-10; stone: fig. 9.12; copper: fig. 9.11. Fig. 9.1: Inv. no. LIII 171, from Area H, Pit 2 (= fig. 16). Fig. 9.2: from Area G, layer ②. Fig. 9.3: from Area H, Pit 7. Fig. 9.4: from Area G, Pit 2. Fig. 9.5: Inv. LIII 167, from Area H, layer ③. Fig. 9.6: Inv. no. LIII 162, from Area G, Pit 2. Fig. 9.7: Inv. no. LIII 165, from Area H, layer ③. Fig. 9.8: from Area H, Pit 1. Fig. 9.9: Inv. no. LIII 177, from Area H, Pit 2. Fig. 9.10: Inv. no. LIII 168, from Area H, layer ③. Fig. 9.11: Inv. no. LIII 176, from Area H, Pit 2. Fig. 9.12: Inv. no. LIII 160, from Area F, layer ② (= fig. 19). Scale 1:2.

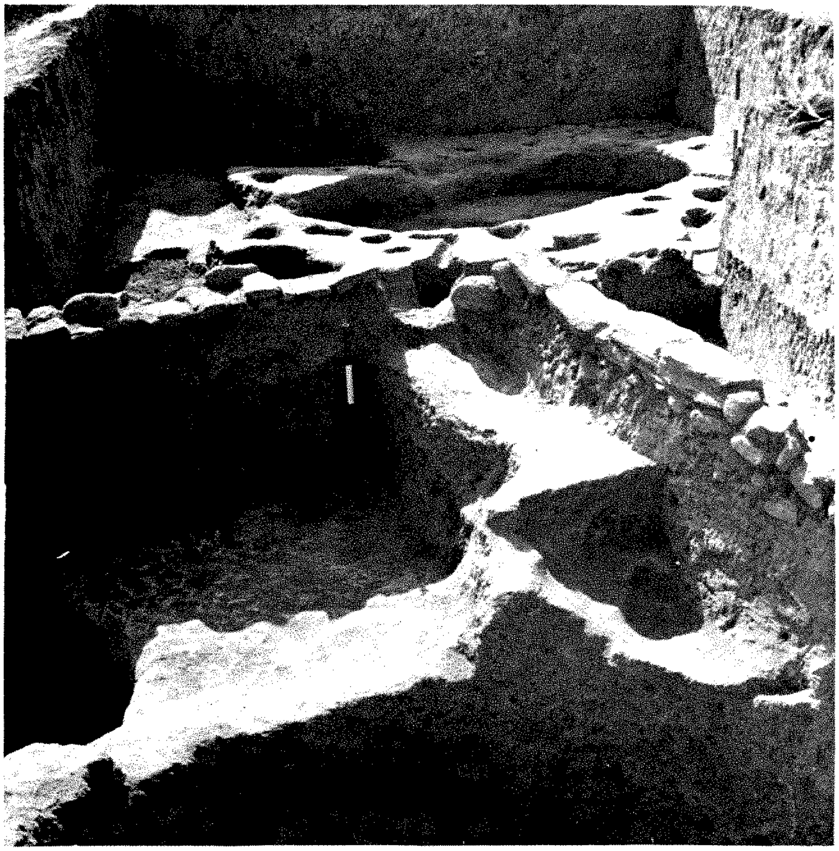


Fig. 10 - Loebanr III, Area H. Stone walled structures built on the layer covering the pits (Neg. no. Dep. CS 13493/3).

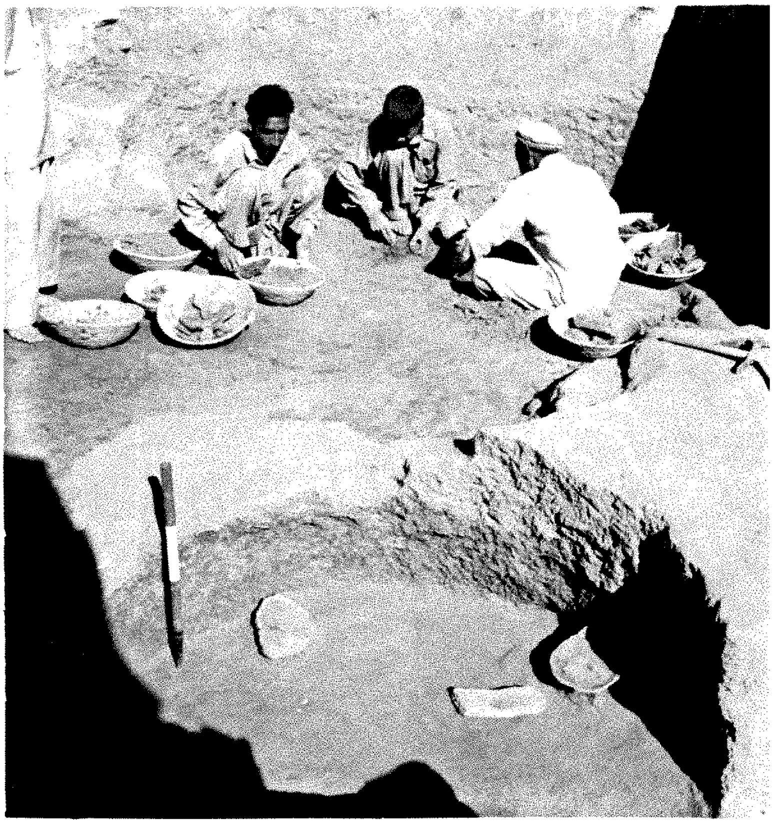


Fig. 11 - Loebanr III, Area H. Pit 4 at the end of the excavation (Neg. no. Dep. CS 13493/4).

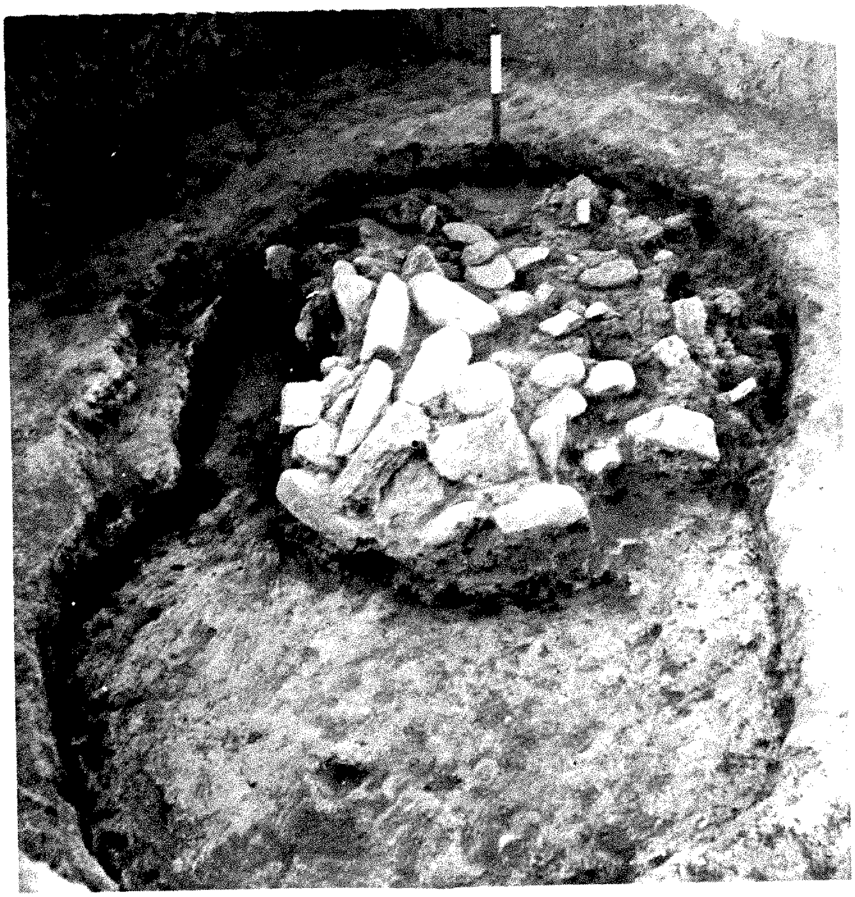


Fig. 12 - Loebanr III, Area H. Pit 1 during the excavation (Neg. no. Dep. CS 13491/2).

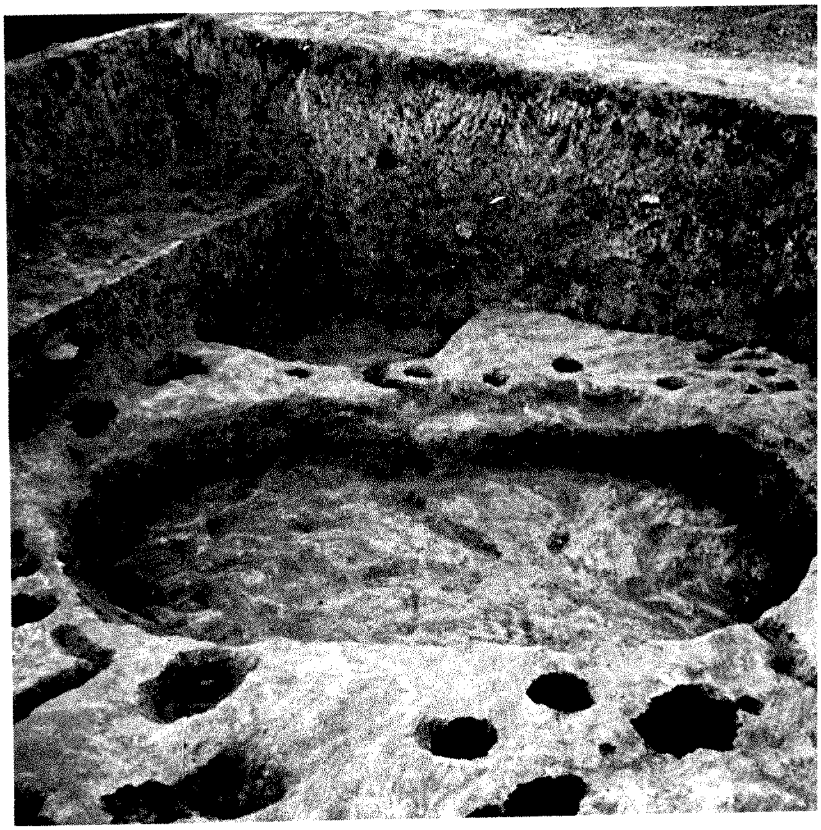


Fig. 13 - Loebanr III, Area II. Pit 1 at the end of the excavation (Neg. no. Dep. CS 13492/11).

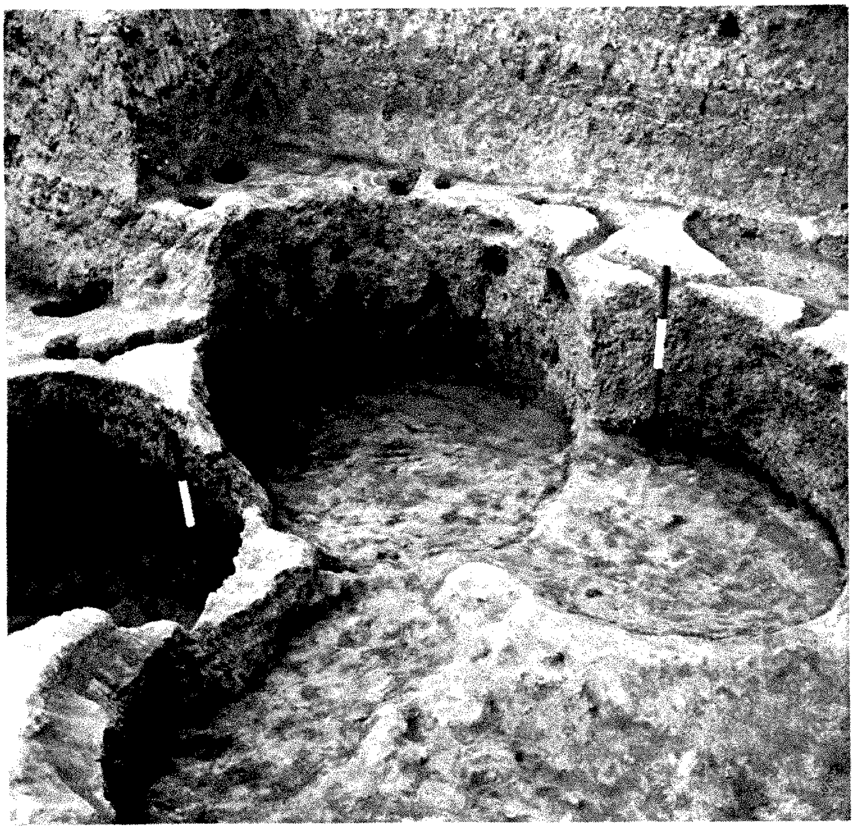


Fig. 14 - Loebanr III, Area H. From the left: Pits 4, 6 and 7 (Neg. no. Dep. CS 13497/2).

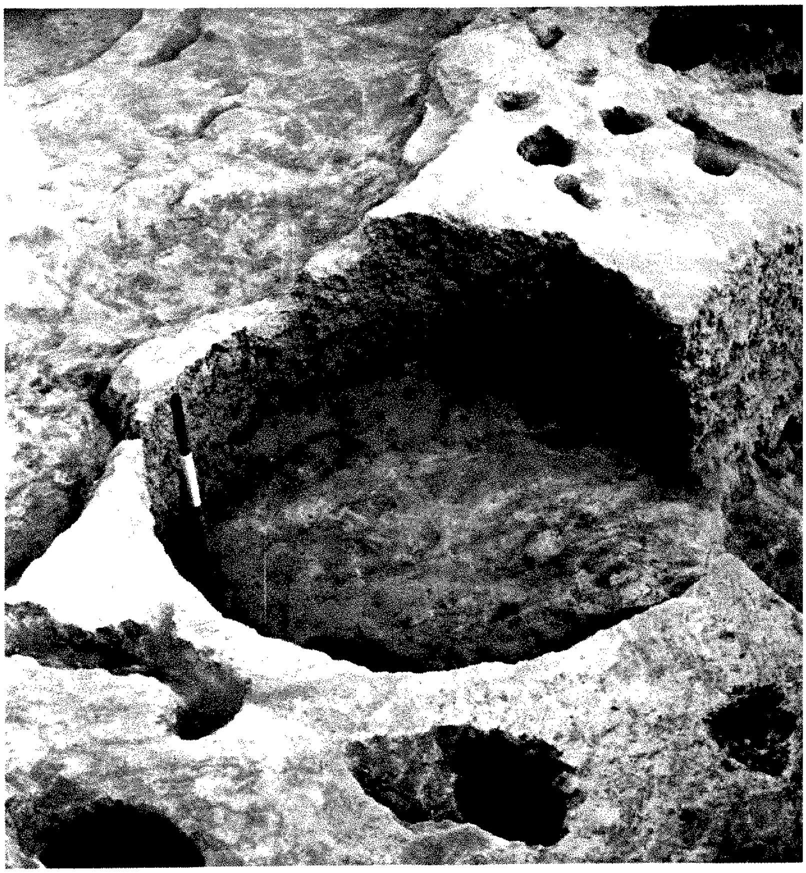


Fig. 15 - Loebanr III, Area H. Pit 4 and part of Pit 3 (to the right). (Neg. no. Dep. CS 13496/9).

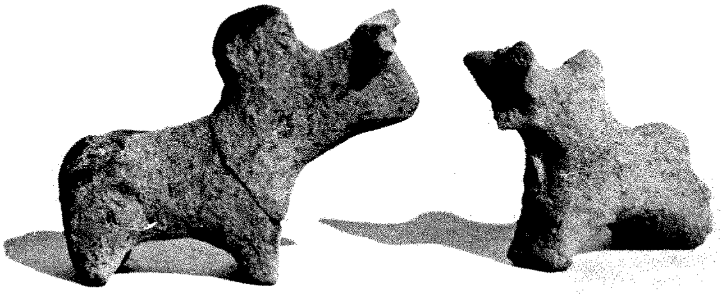


Fig. 16 - Terracotta figurines. To the left: Inv. no. LIII 171, from Area H, Pit 2 (= fig. 9.1); to the right: Inv. no. LIII 173, from Area H, Pit 4 (Neg. no. Dep. CS 13496/12).

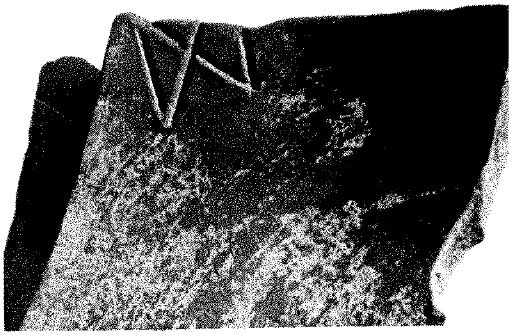


Fig. 18 - Red bowl with incised pot-mark, I
no. LIII 181, from Area H, Pit 4 (= fig. 8
(Neg. no. Dep. CS 13498/5).

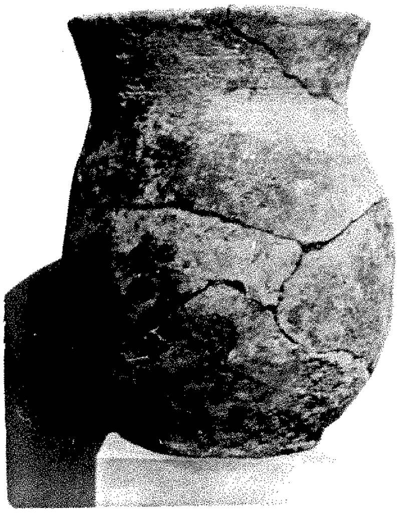


Fig. 17 - Gritty-brown jar, Inv. no. LIII 169, from Area H, Pit 3 (= fig. 7.8) (Neg. no. Dep. CS 13498/9).

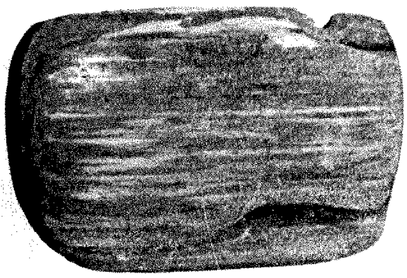


Fig. 19 - Stone perforated knife, Inv. no.
160, from Area F, layer ② (= fig. 9.12) (
no. Dep. CS 13498/6).

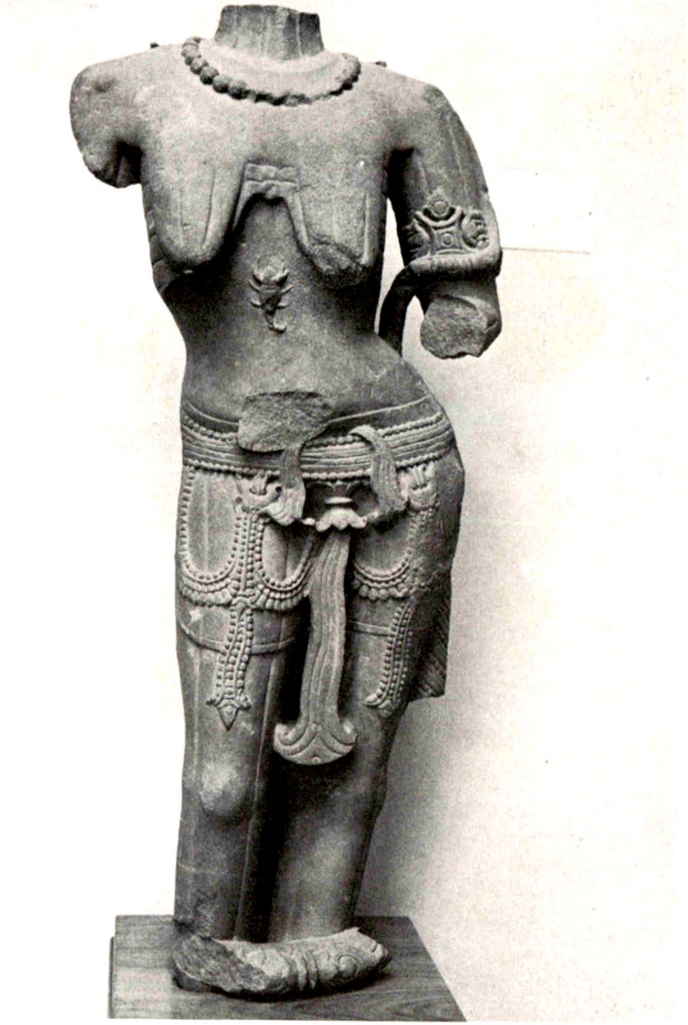


Fig. 1 - Standing Scorpion Goddess from the Royal Ontario Museum, Ontario. Northwest Indian, late 9th-early 10th century.

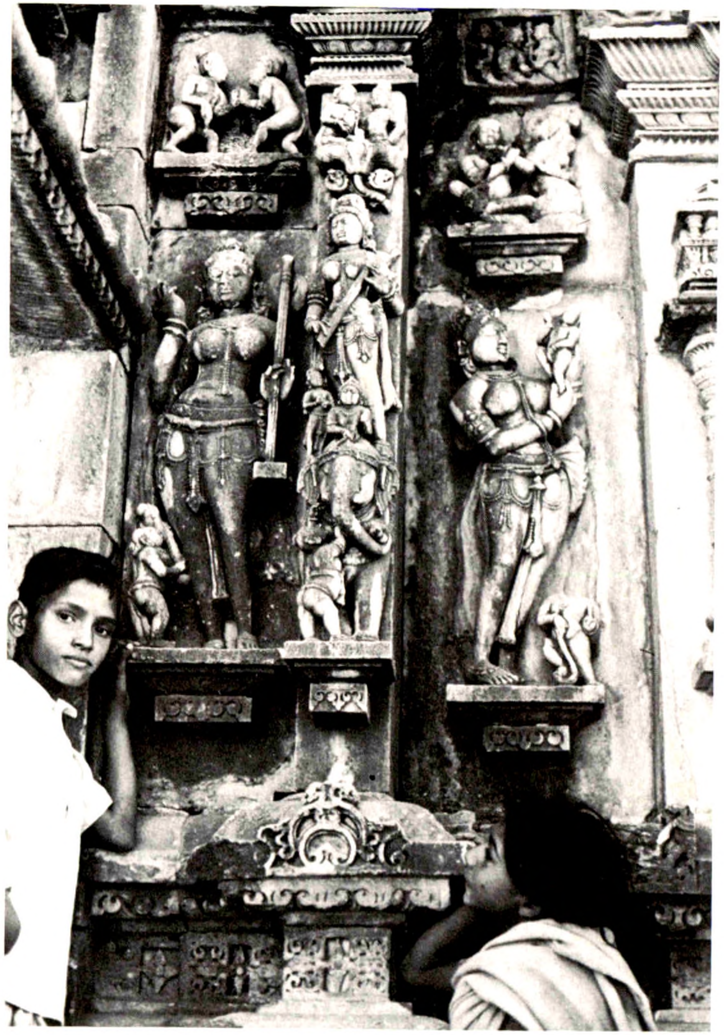


Fig. 2 - *Surasundarī* from Jagat, Rajasthan, 925 A.D.

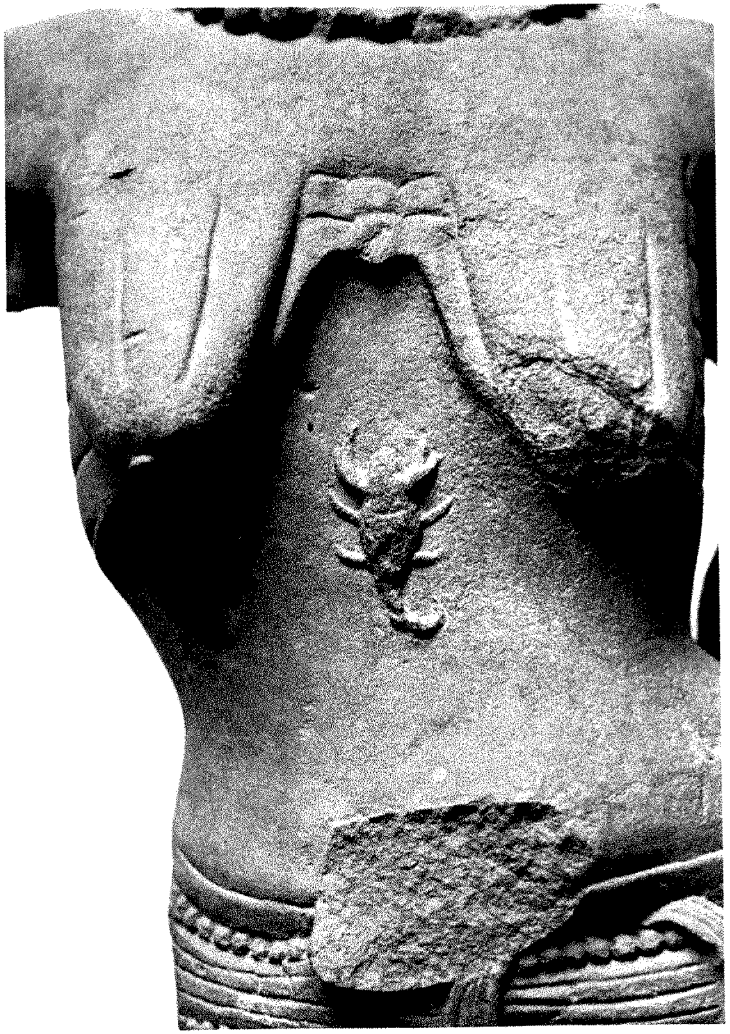


Fig. 3 - Detail of the Standing Scorpion Goddess in the Royal Ontario Museum, fig. 1.

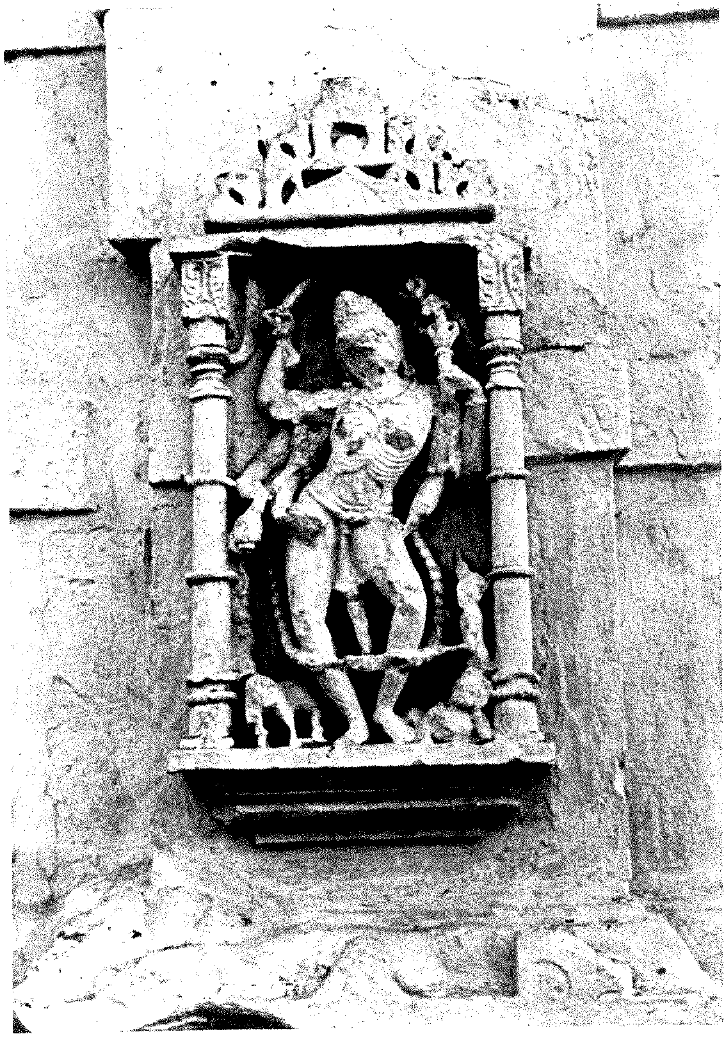


Fig. 4 - Scorpion Goddess from the Paṅkhanātha Temple, Kheḍ-Brahmā, Gujarat, first half of the 11th century.

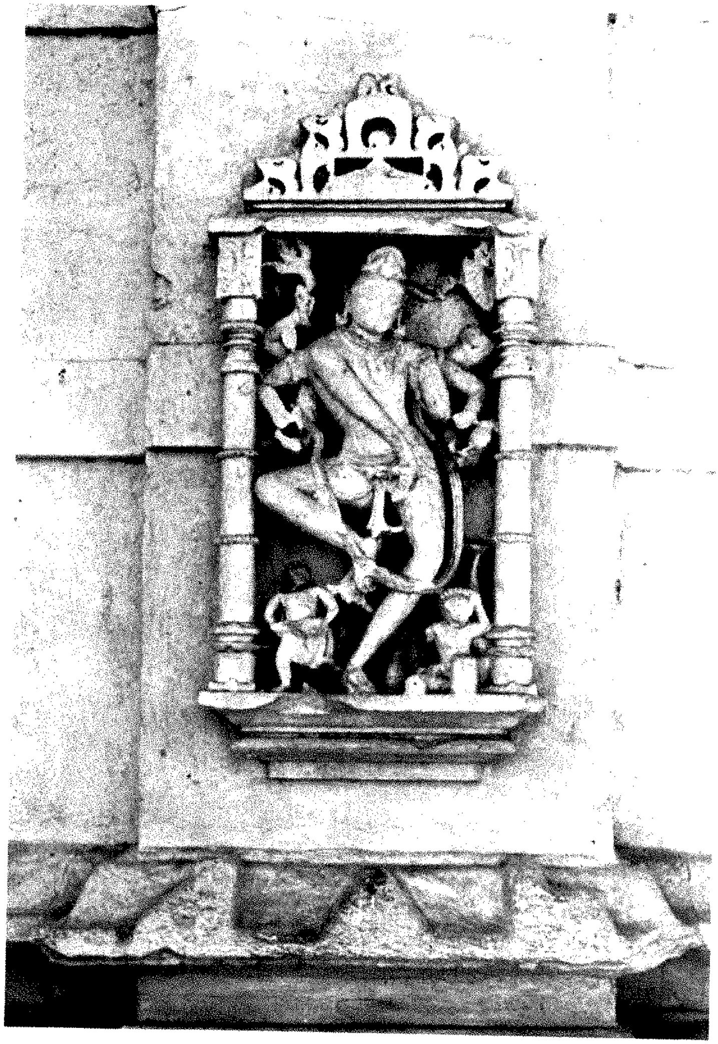


Fig. 5 - Dancing Śiva from Kheḍ-Brahmā, Paṅkhanātha Temple, Gujarat, first half of the 11th century.

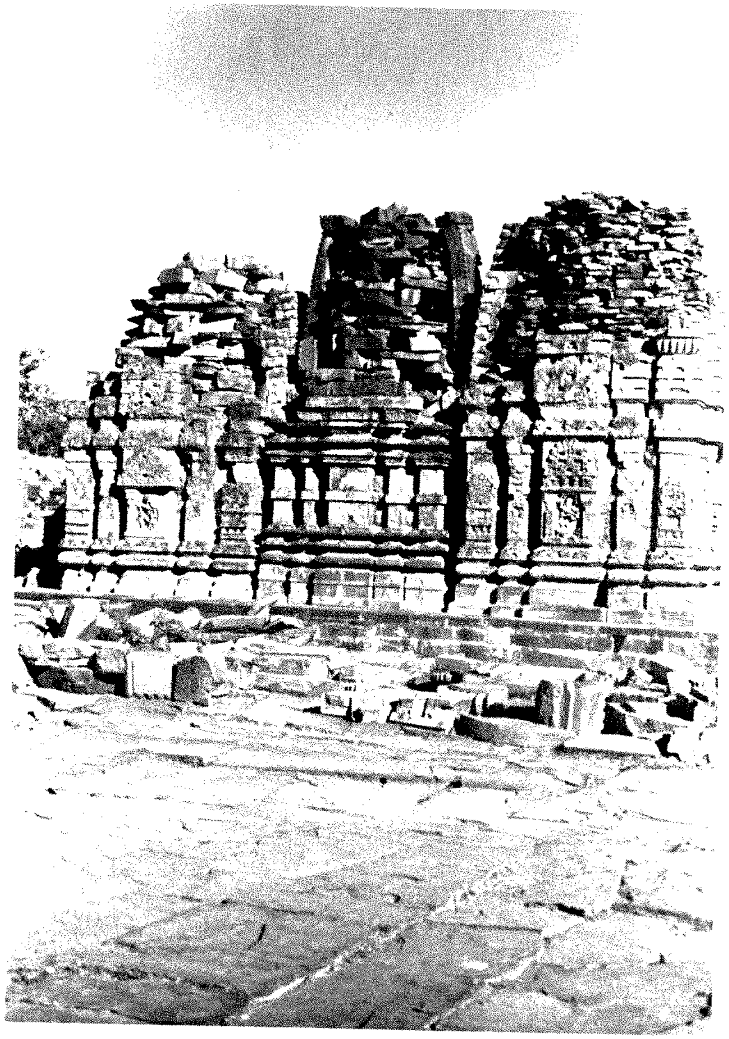


Fig. 6 - Dancing Śiva from the Mahānaleśvara Temple at Menal, Rajasthan, *in situ*.

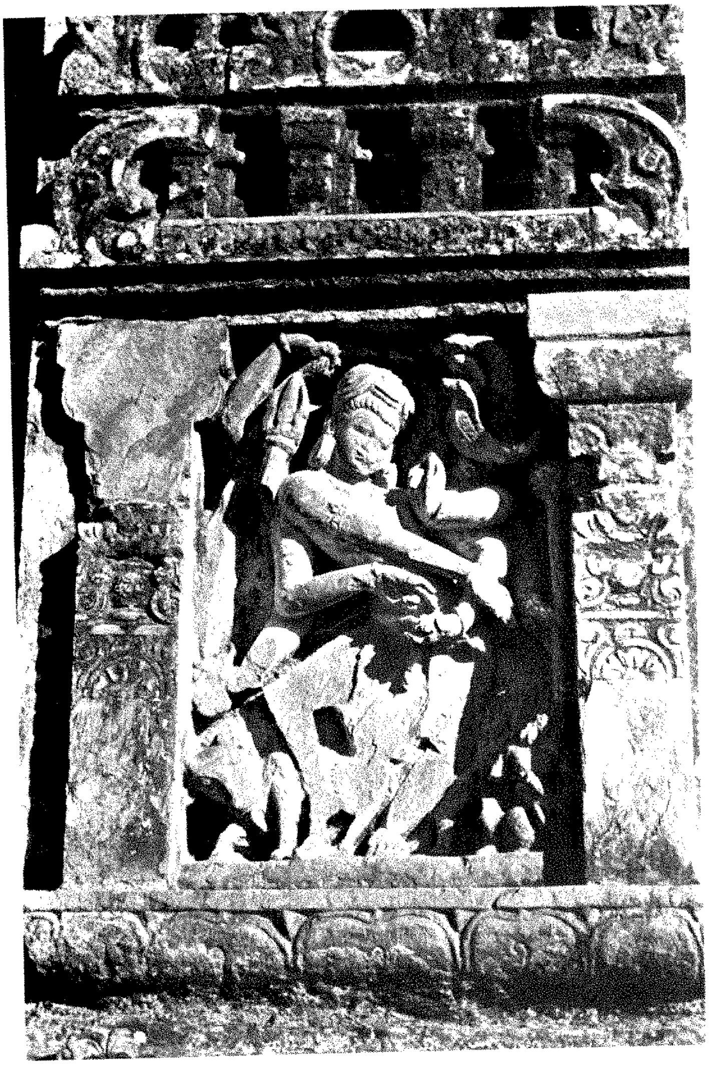
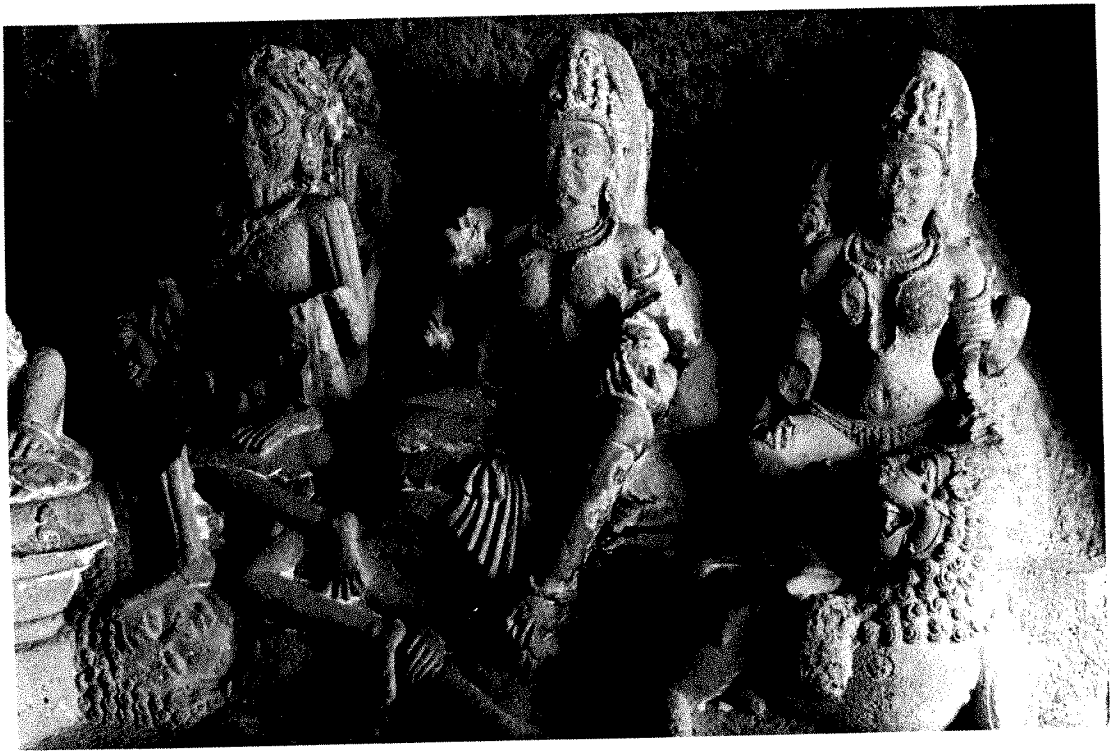


Fig. 7 - Dancing Śiva, detail, Mahānaleśvara Temple, Menal, Rajasthan.

Fig. 8 - Cāmuṇḍā from the Kailāsanāth Temple at Ellora.



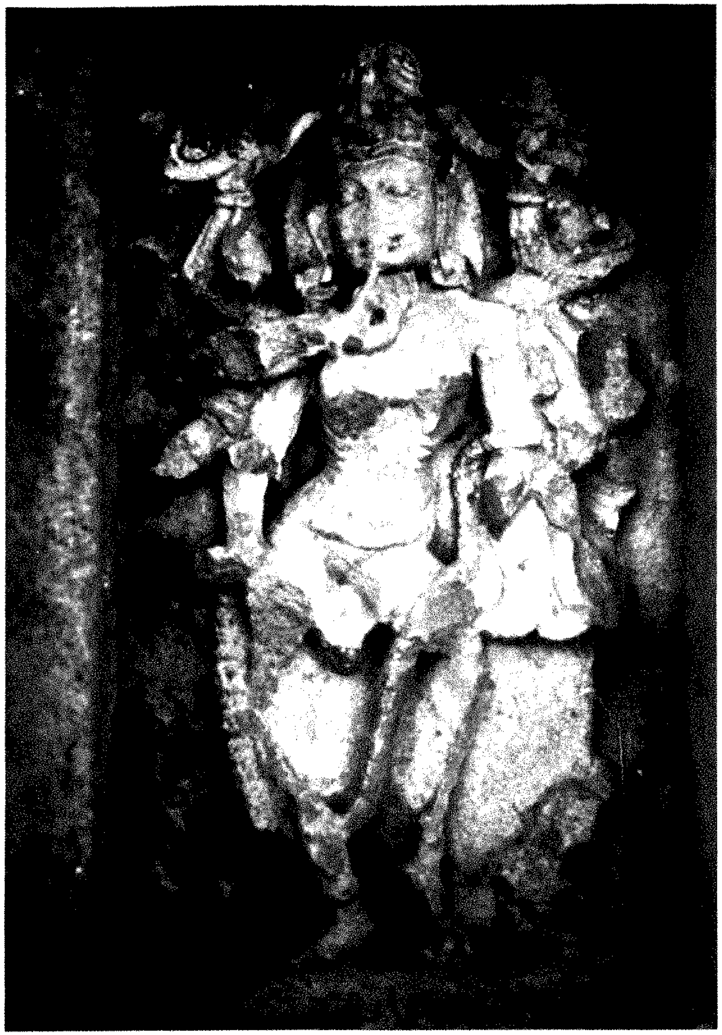


Fig. 9 - Dancing Scorpion Goddess from Un, 11th century.

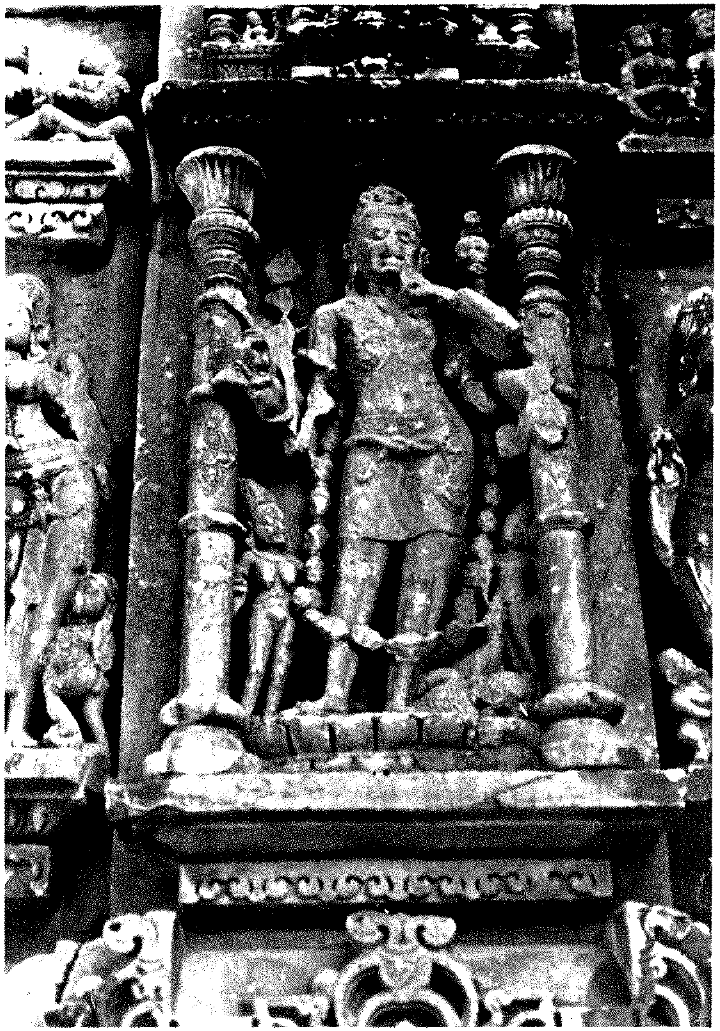


Fig. 10 - Kālī from Jagat, Rajasthan, 925 A.D.

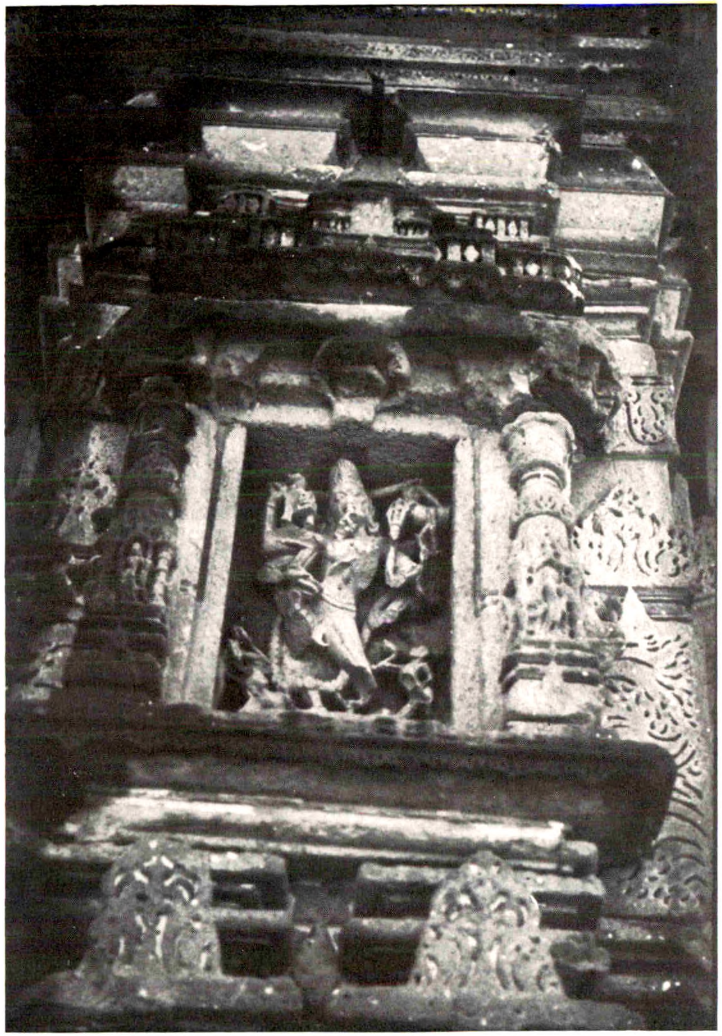


Fig. 11 - Dancing Scorpion Goddess from Un, 11th century.

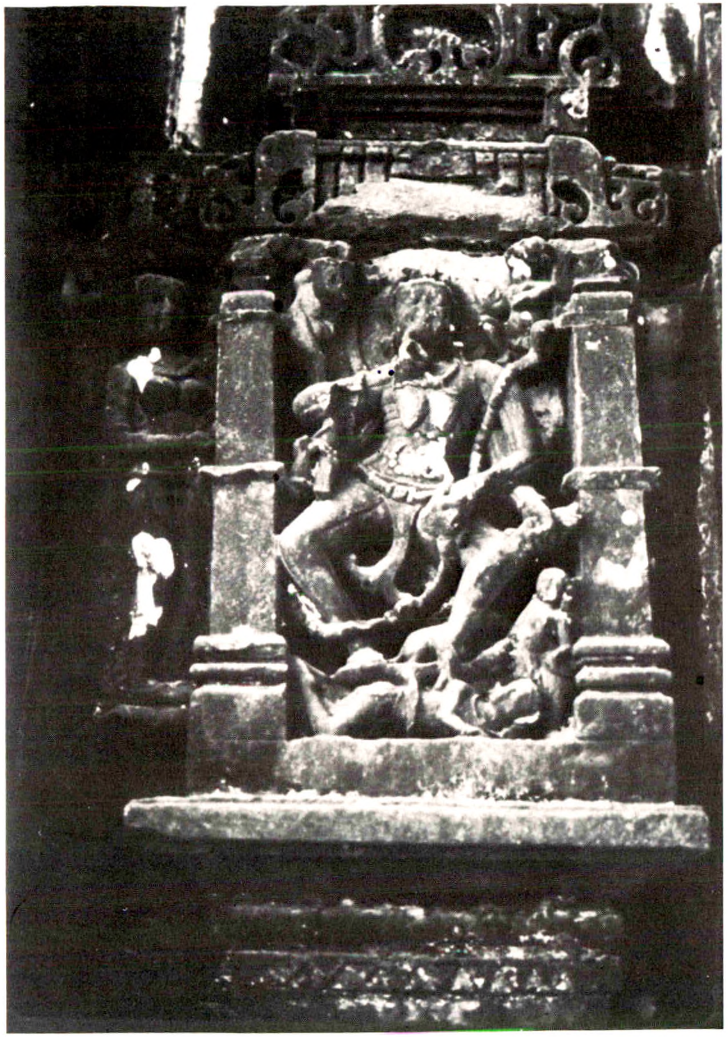


Fig. 12 - Dancing Scorpion Goddess from Mahādeva Temple at Nohta, late 10th century.

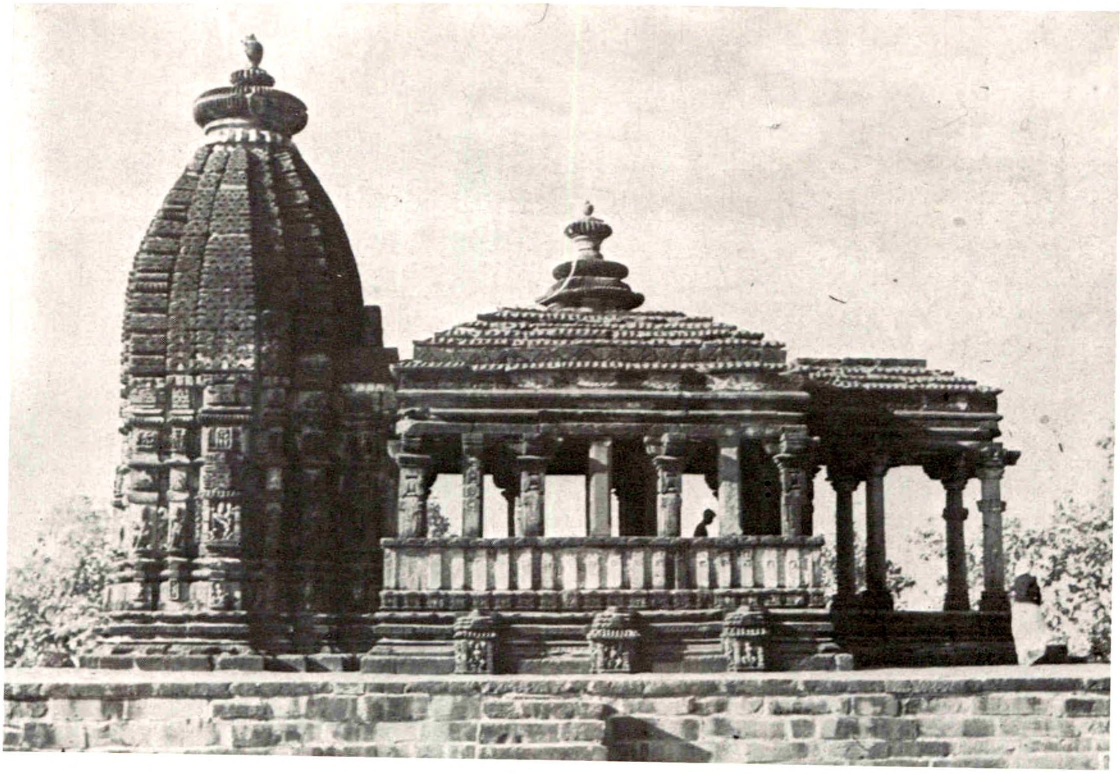


Fig. 13 - Mahādeva Temple at Nohta, late 10th century.

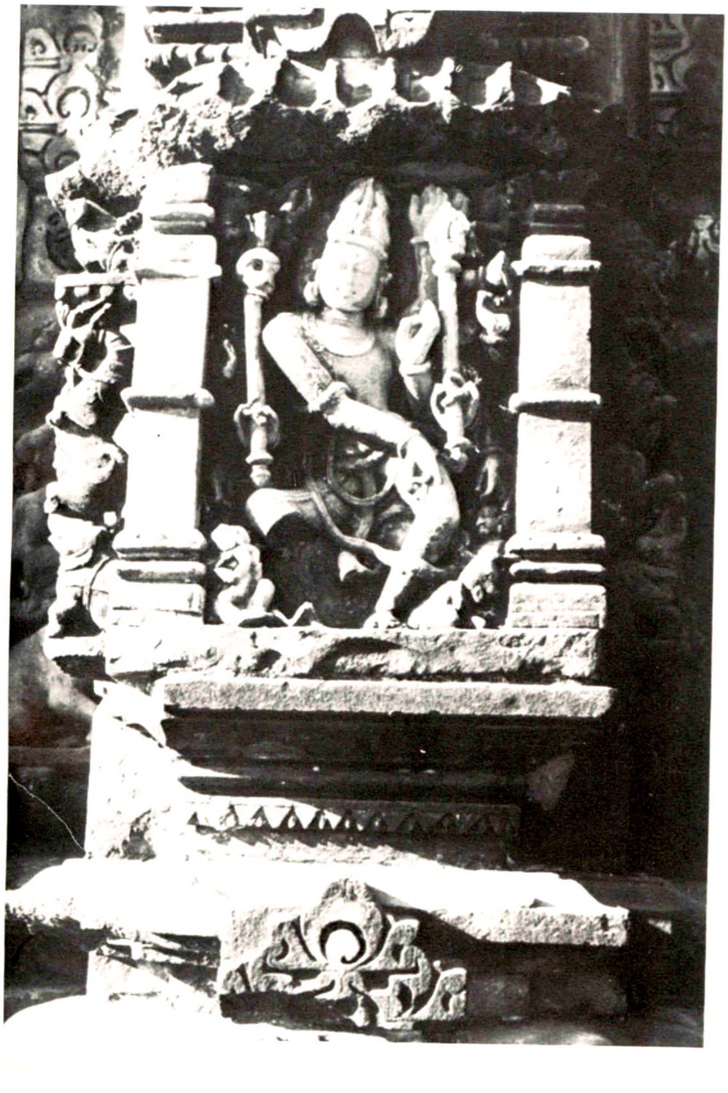


Fig. 14 - Dancing Śiva from Mahādeva Temple, Nohta, late 10th century.

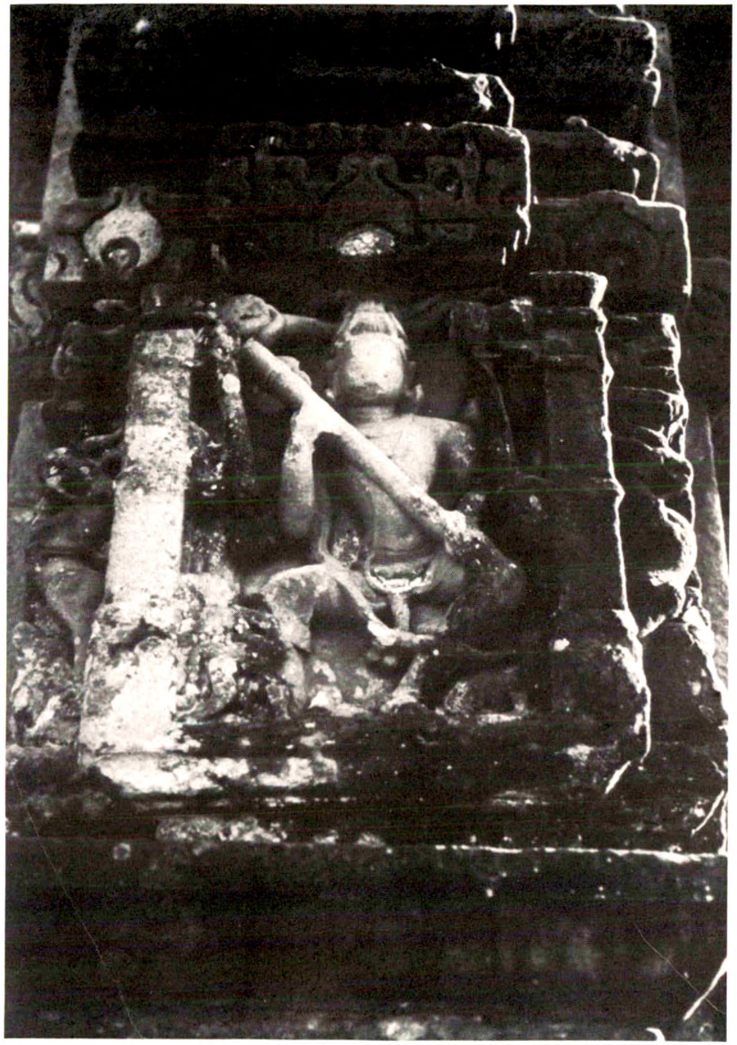


Fig. 15 - Vīrabhadra from Mahādeva Temple, Nohta, late 10th century.

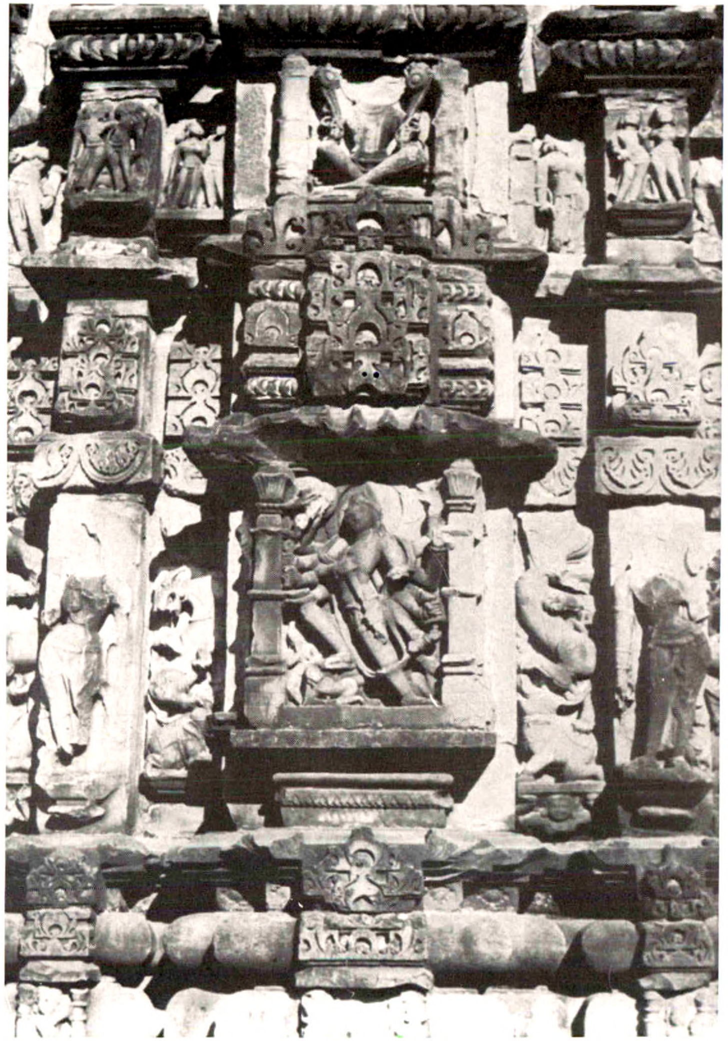


Fig. 16 - Andhakāsuravadha from Mahādeva Temple, Nohta, late 10th century.

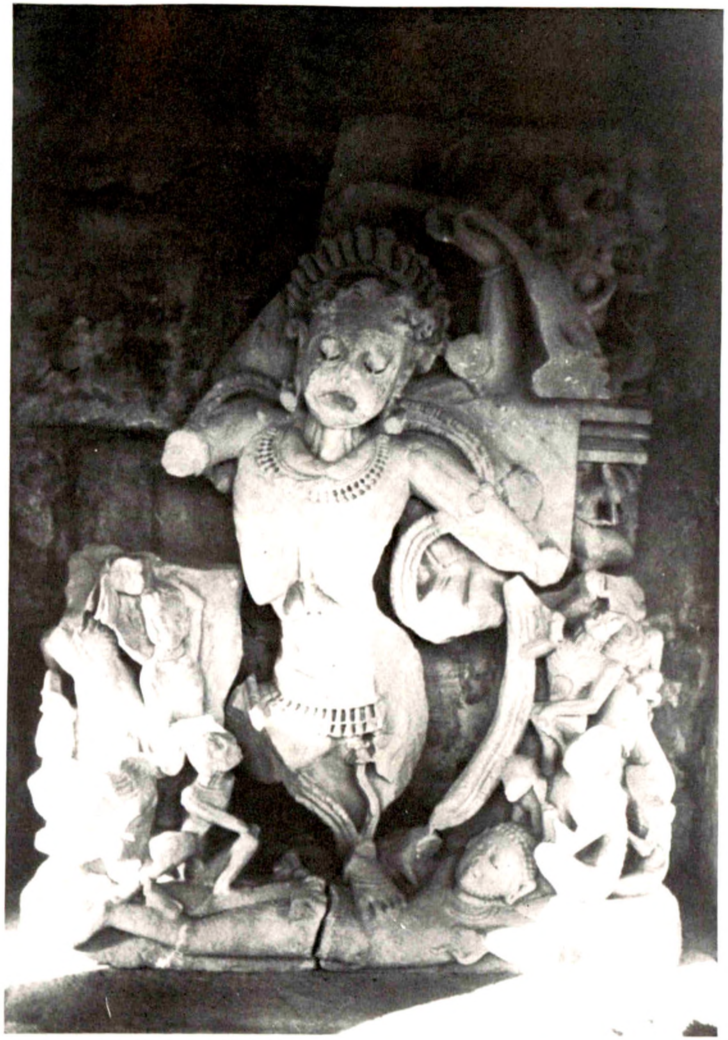


Fig. 17 - Dancing Scorpion Goddess from Bheraghāt, late 10th century.

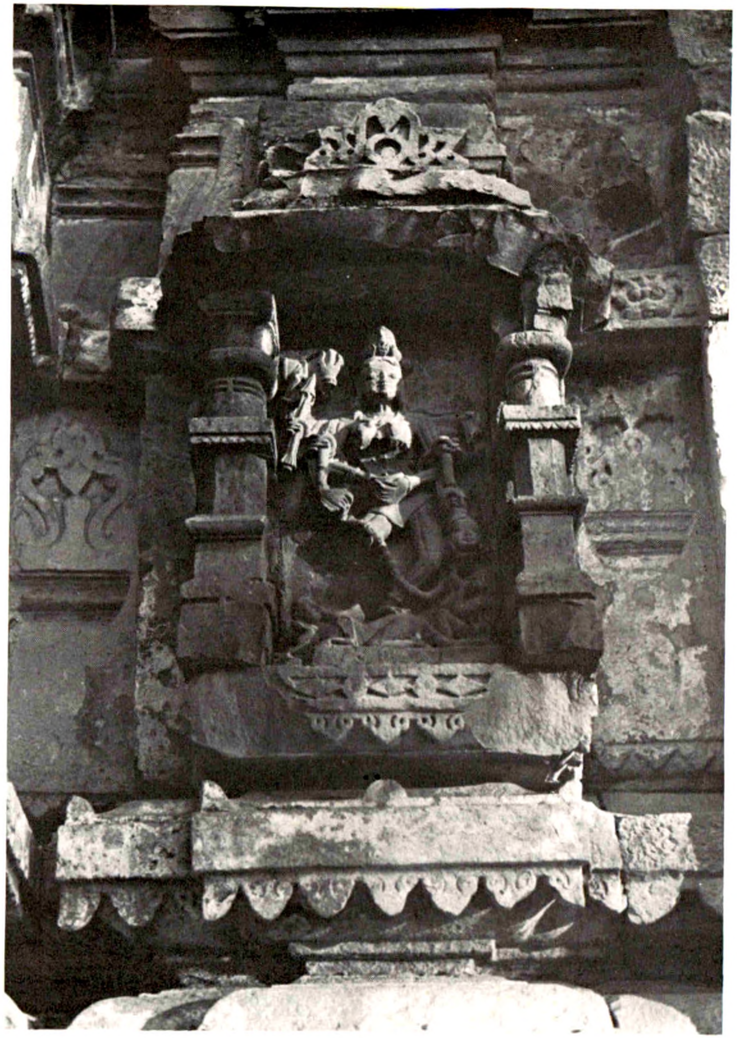


Fig. 18 - Dancing Scorpion Goddess from Jain temple at Bijolia.

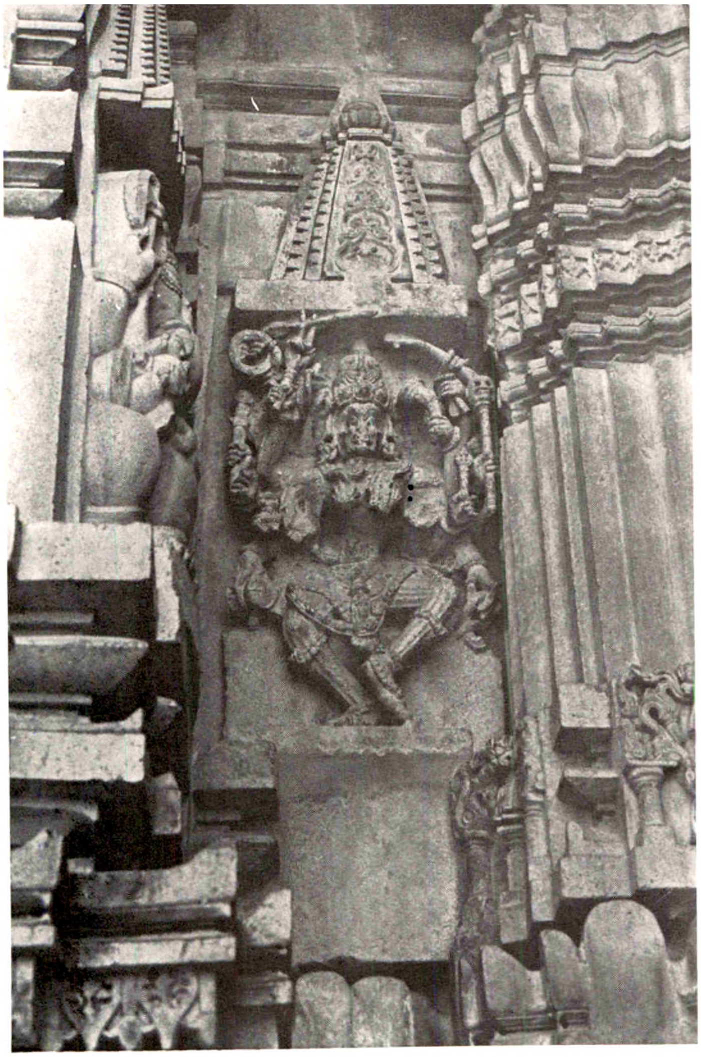
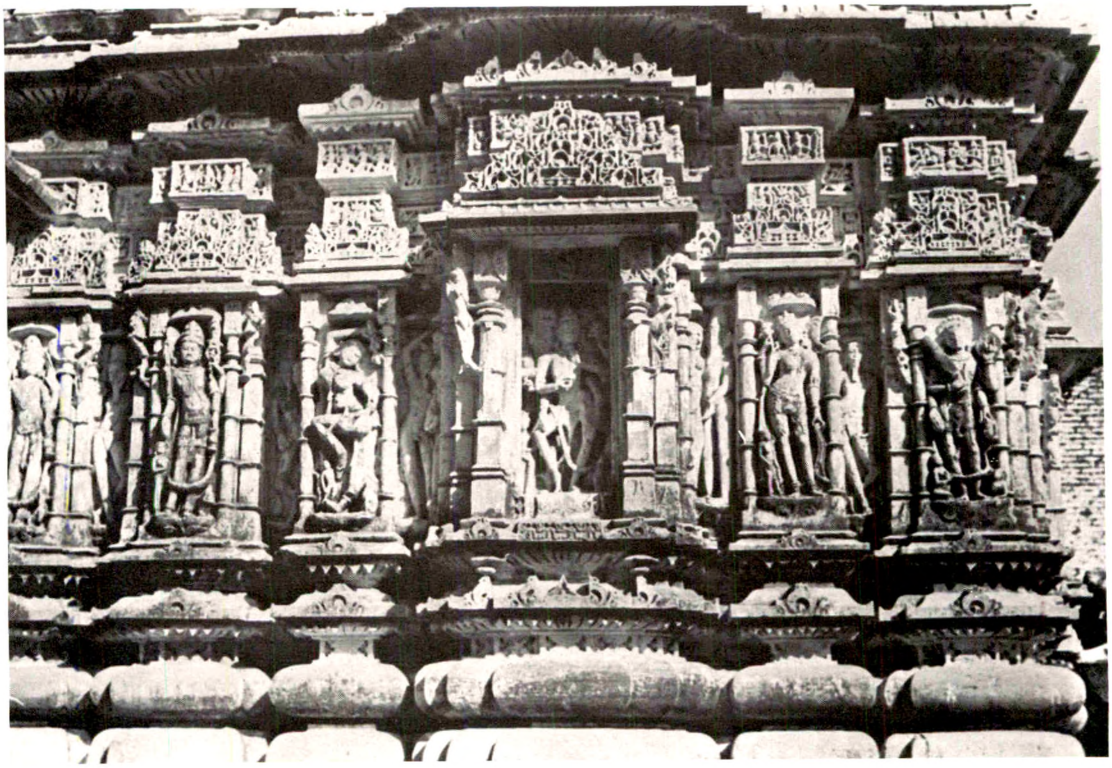


Fig. 19 - Dancing Scorpion Goddess from Belur, 1117 A.D.

Fig. 20 - Dancing Cāmuṇḍā from Limboji-Mātā Temple, Delmāl, Gujarat, late 11th century. Wall surface with goddess.



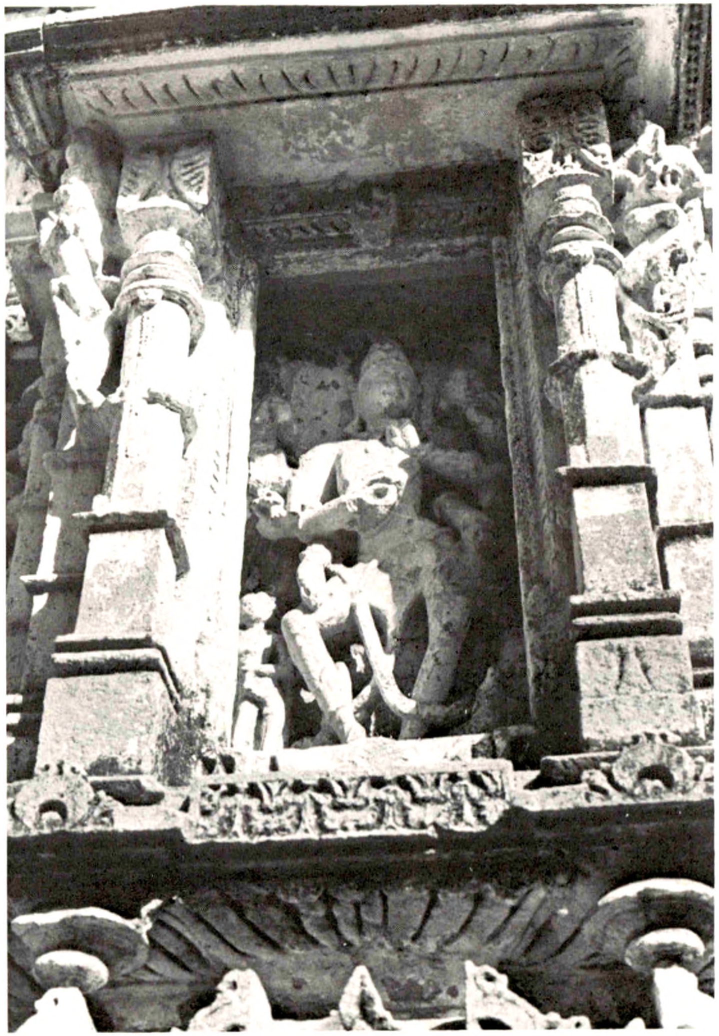


Fig. 21 - Detail, Dancing Scorpion Goddess from Limboji-Mātā Temple at Delmāl, Gujarat, late 11th century.

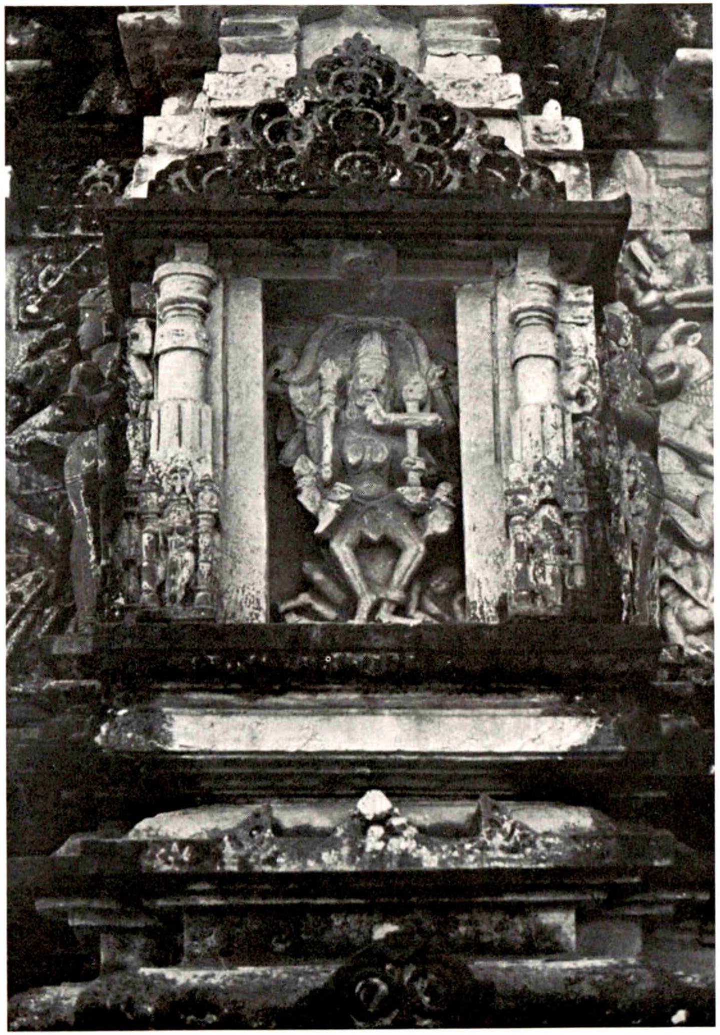


Fig. 22 - Dancing Cāmuṇḍā from Mahānaleśvara Temple at Menal, Rajasthan.

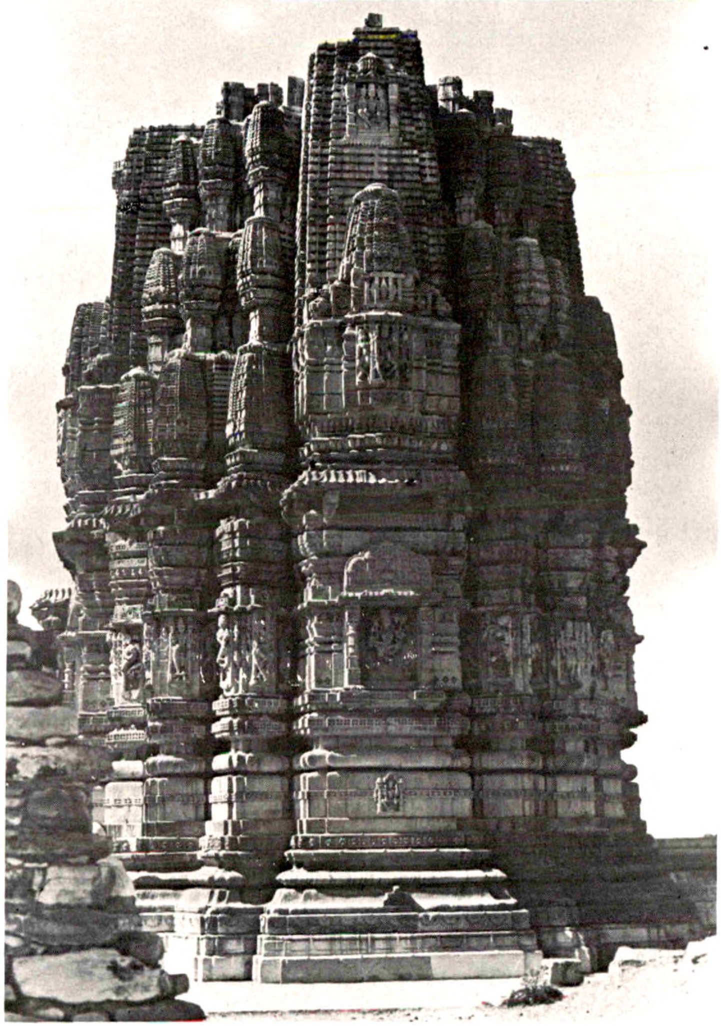


Fig. 23 - Back of ruined temple at Chittor showing dancing Cāmuṇḍā.

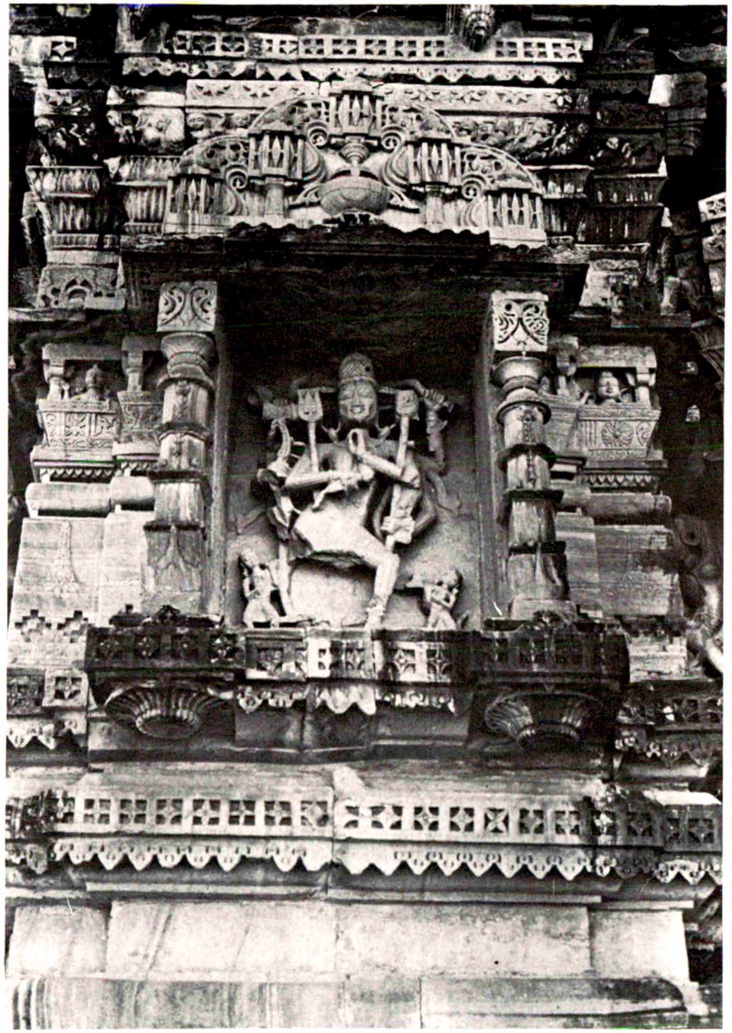


Fig. 24 - Dancing Cāmuṇḍā from ruined temple at Chittor.

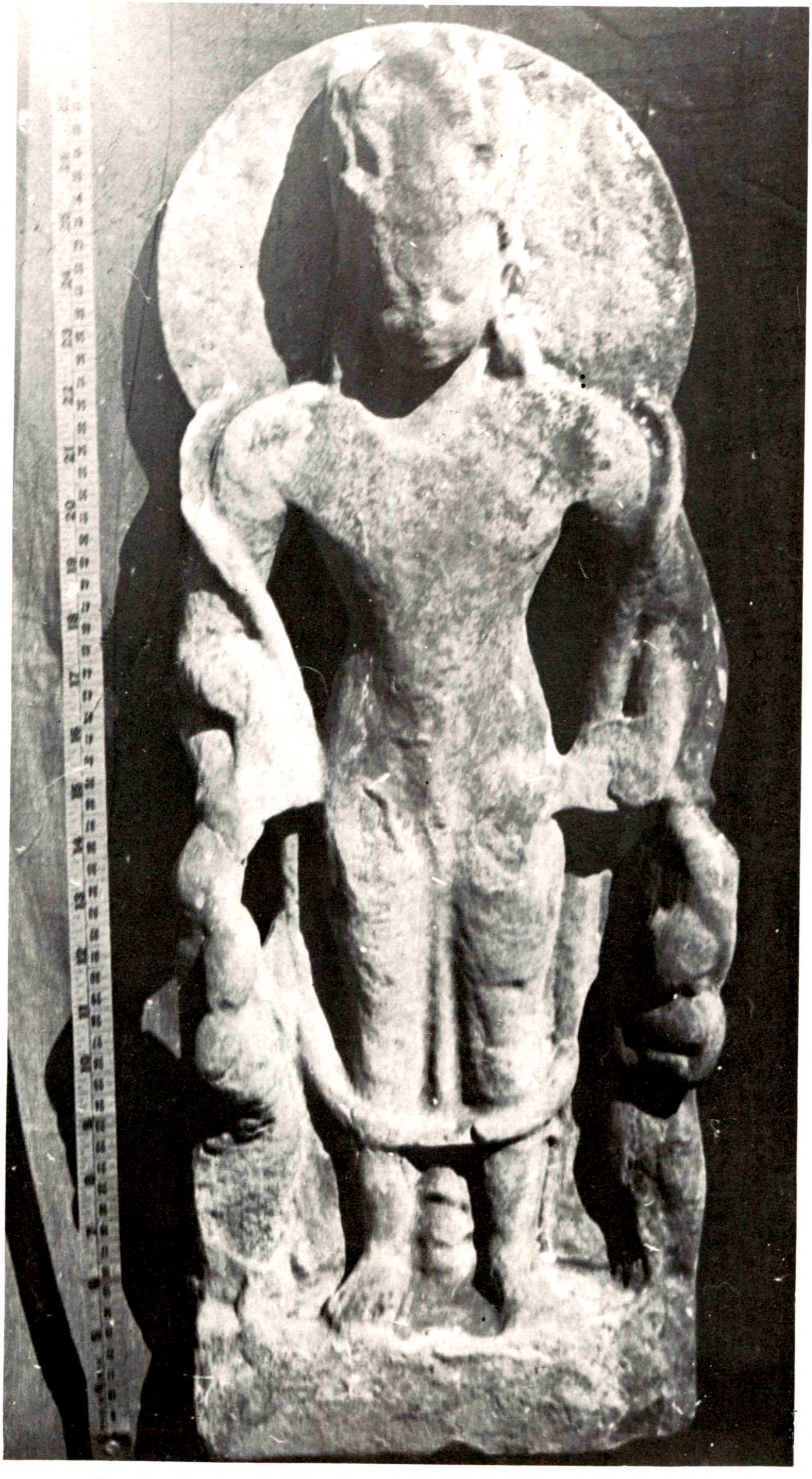


Fig. 1 - Image of Viṣṇu from Nakuleśvara (photo: M.P. Joshi).

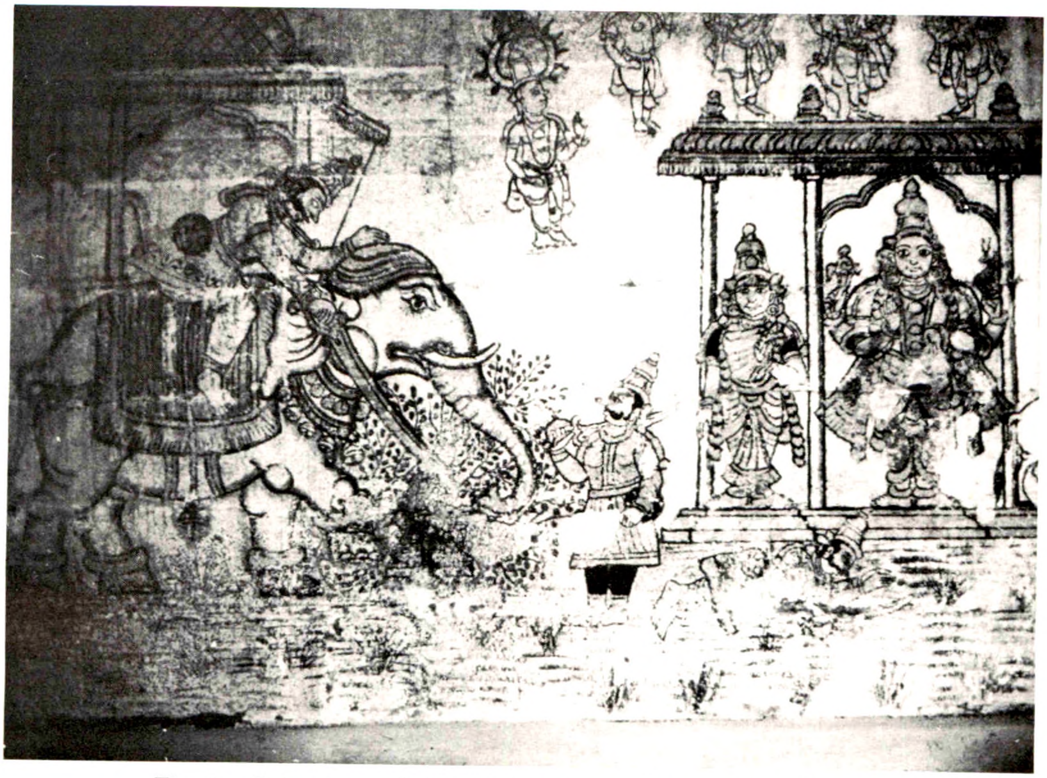


Fig. 1 - Painted mural, Mācilāmaṇīcuvarar shrine, Tirumullaivāyil.

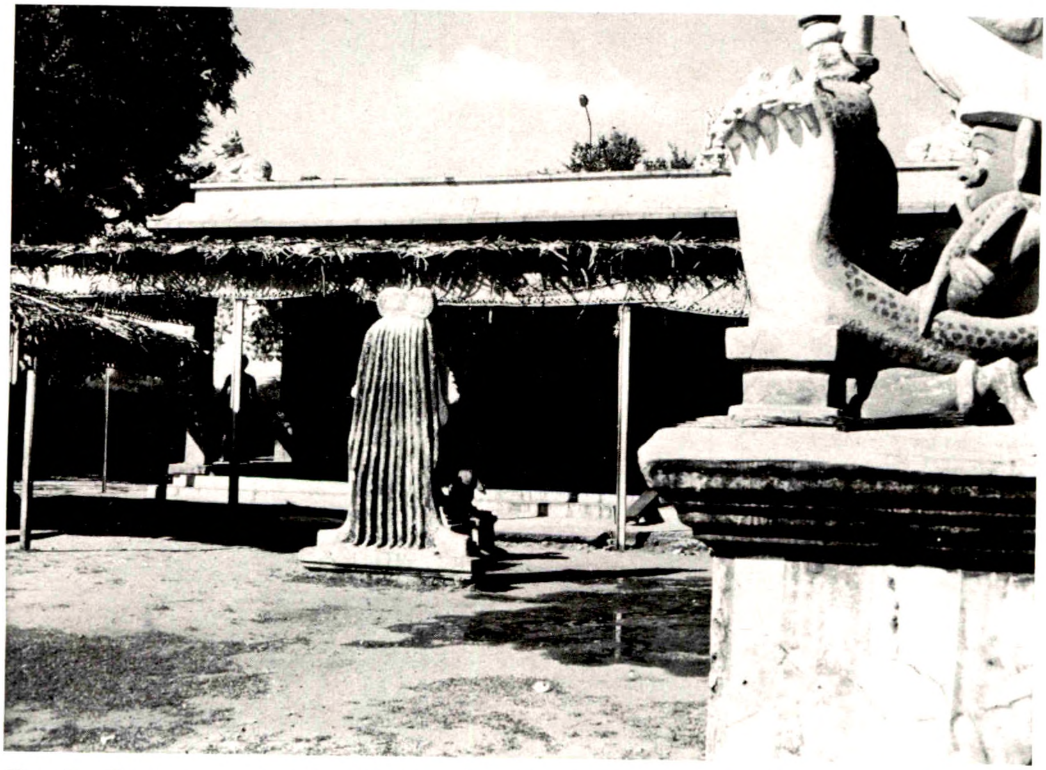


Fig. 2 - Entrance to the Paccaimalaiyammaṉ shrine, Tirumullaivāyil; Gautama, his hair trailing to the ground, faces the goddess. On the left, the roofed entrance to the Maṉṉāṭīcuvarar shrine.

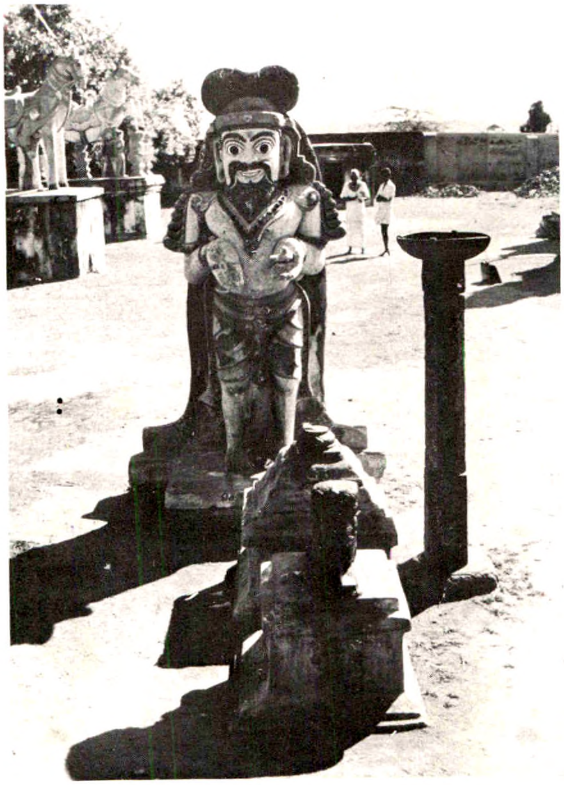


Fig. 3 - Gautama.

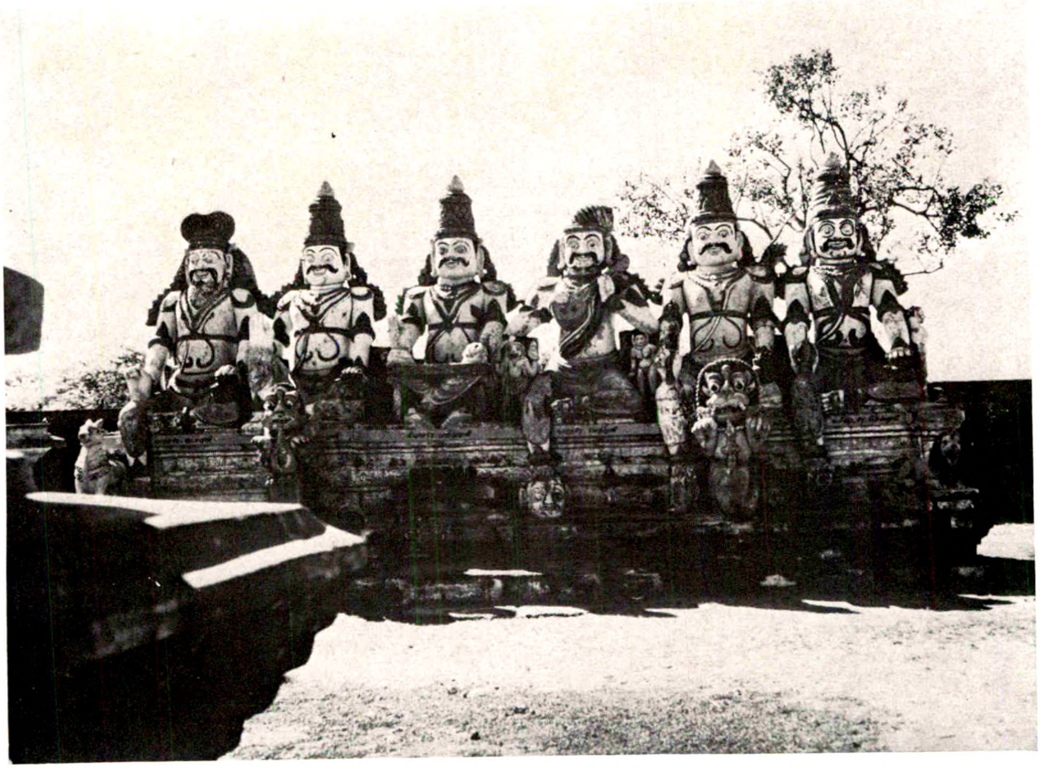


Fig. 4 - The Six Sages.

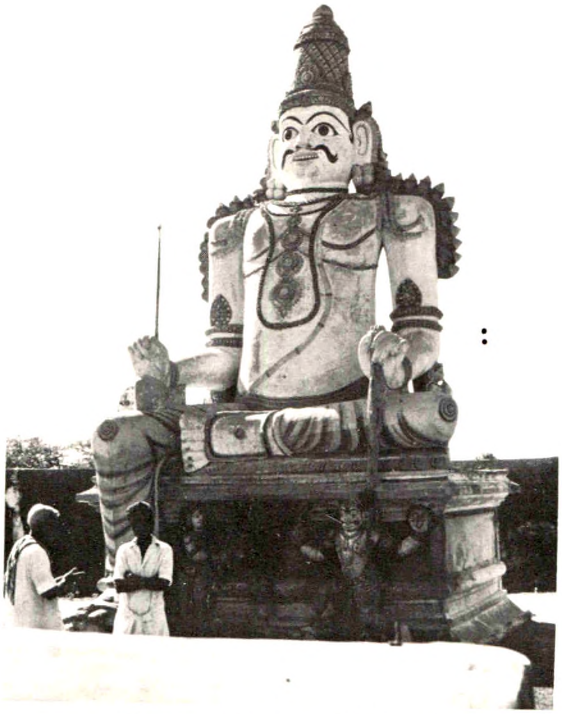


Fig. 5 - Munīśvara/Vāḻumuṉi.

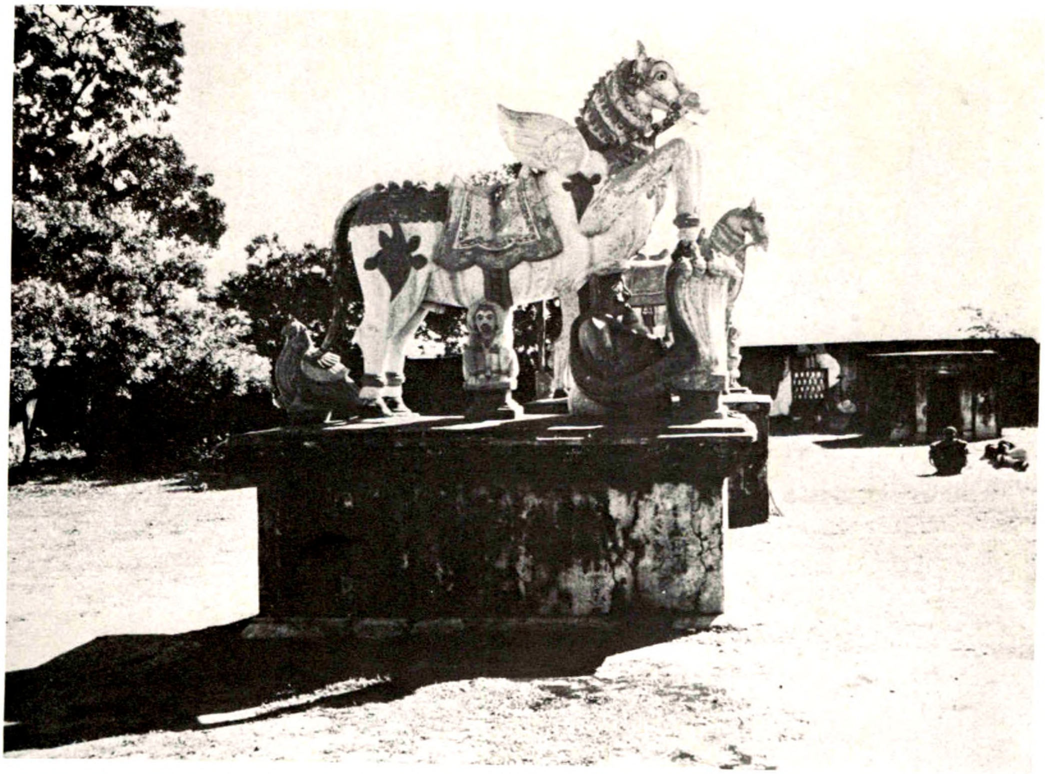


Fig. 6 - Winged horse and serpent.

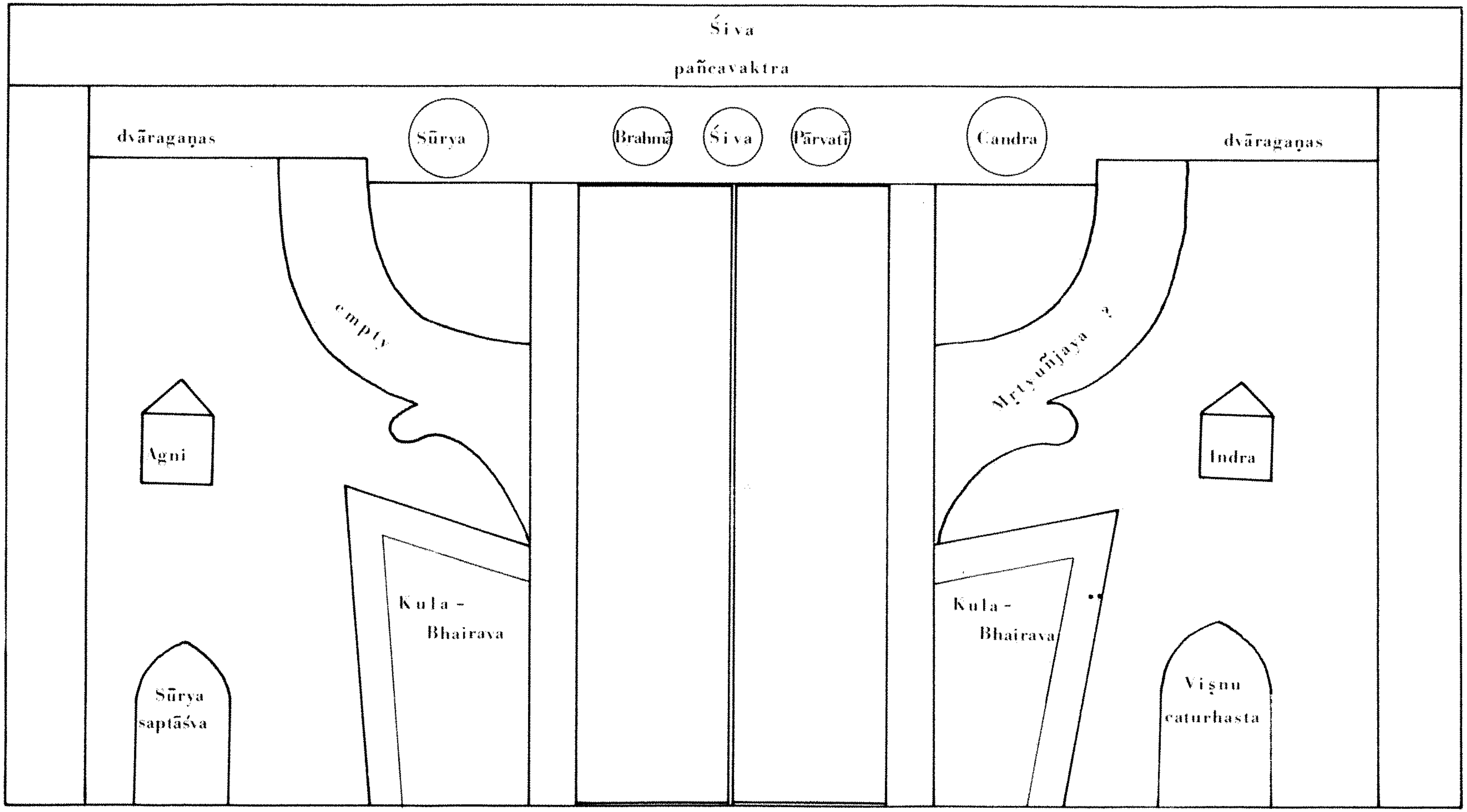


Fig. 1 - Sketch showing the position of the carvings on the Viśveśvara temple, Patan.

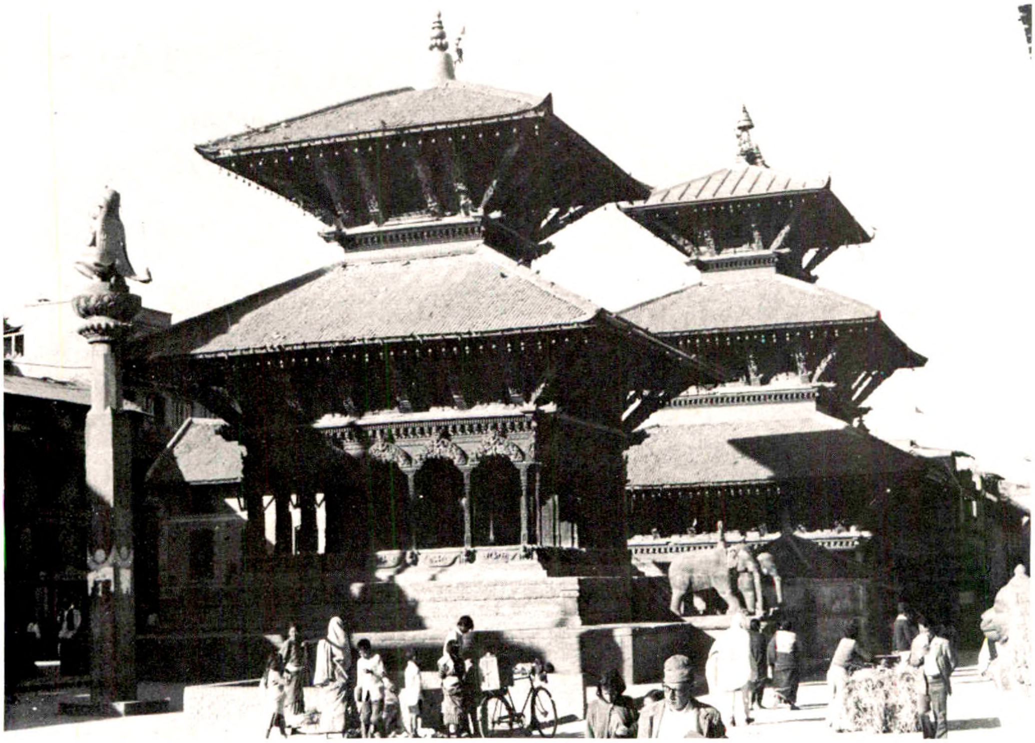


Fig. 2 - Viśveśvara temple (foreground) and Bhimsen temple (background), Patan, view from SE.

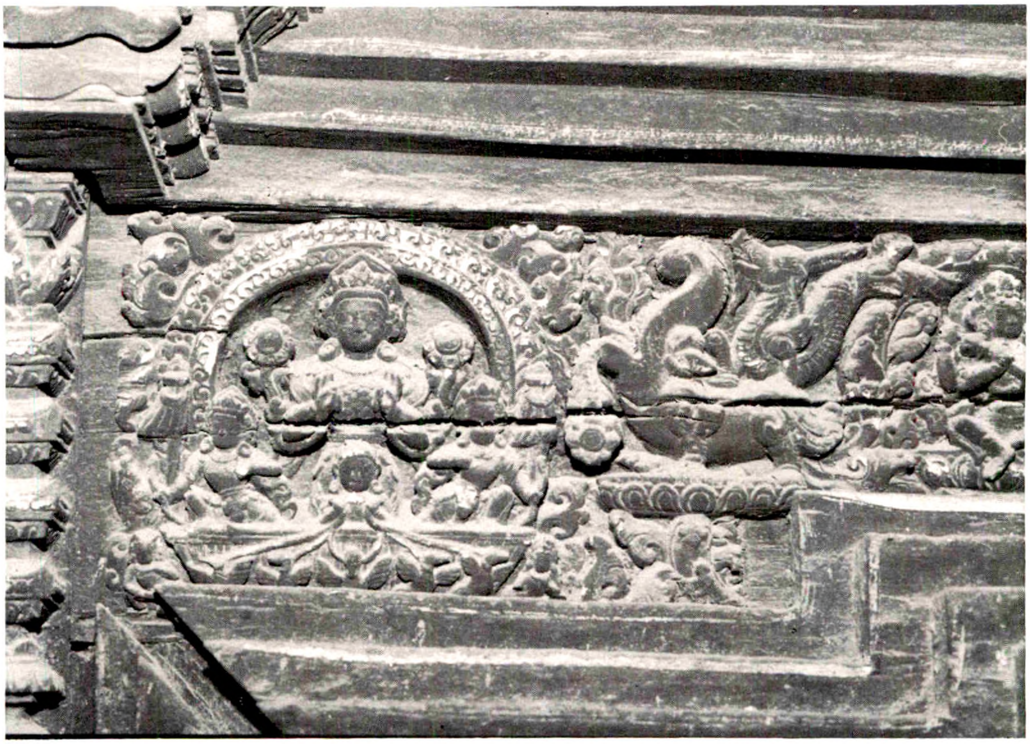


Fig. 3 - Viśveśvara temple, east wall, right: Moon/Candra.

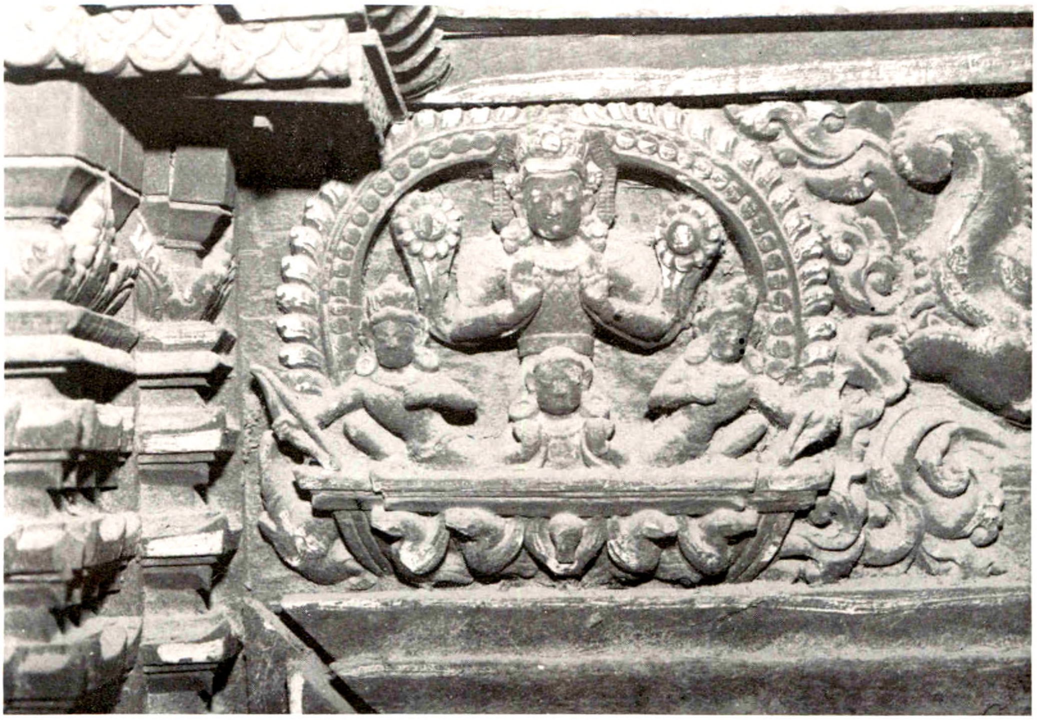


Fig. 4 - Hariśaṅkara temple, east wall, right: Moon/Candra.

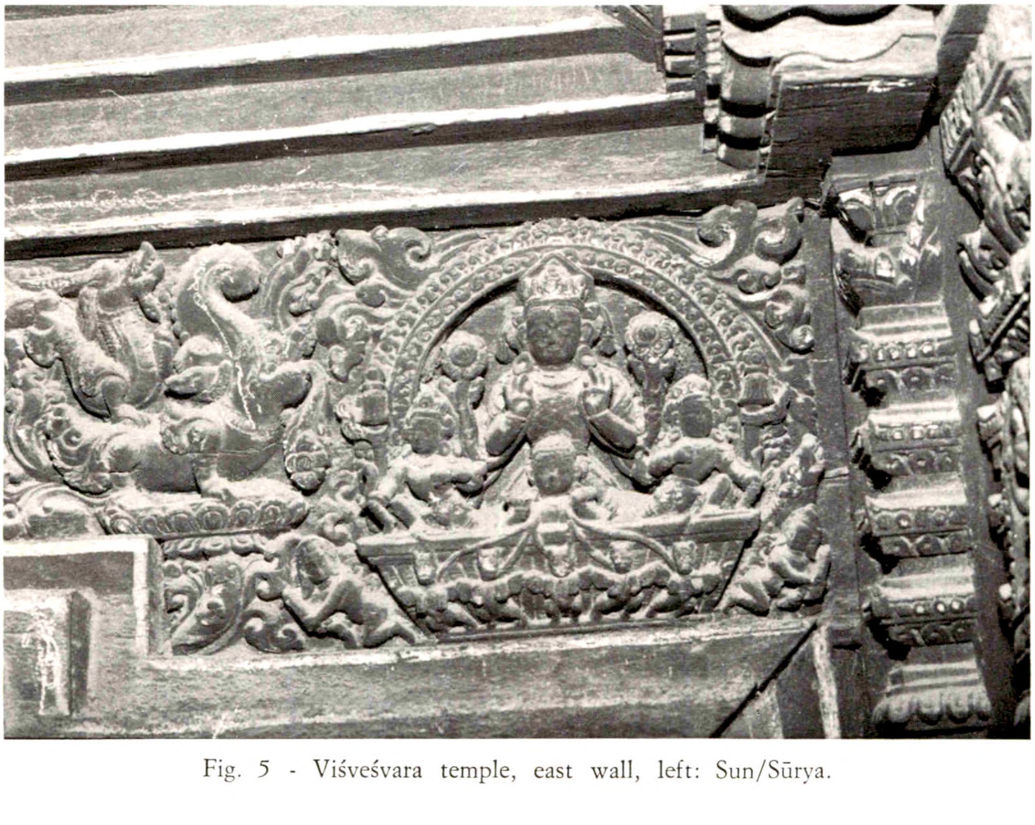


Fig. 5 - Viśveśvara temple, east wall, left: Sun/Sūrya.

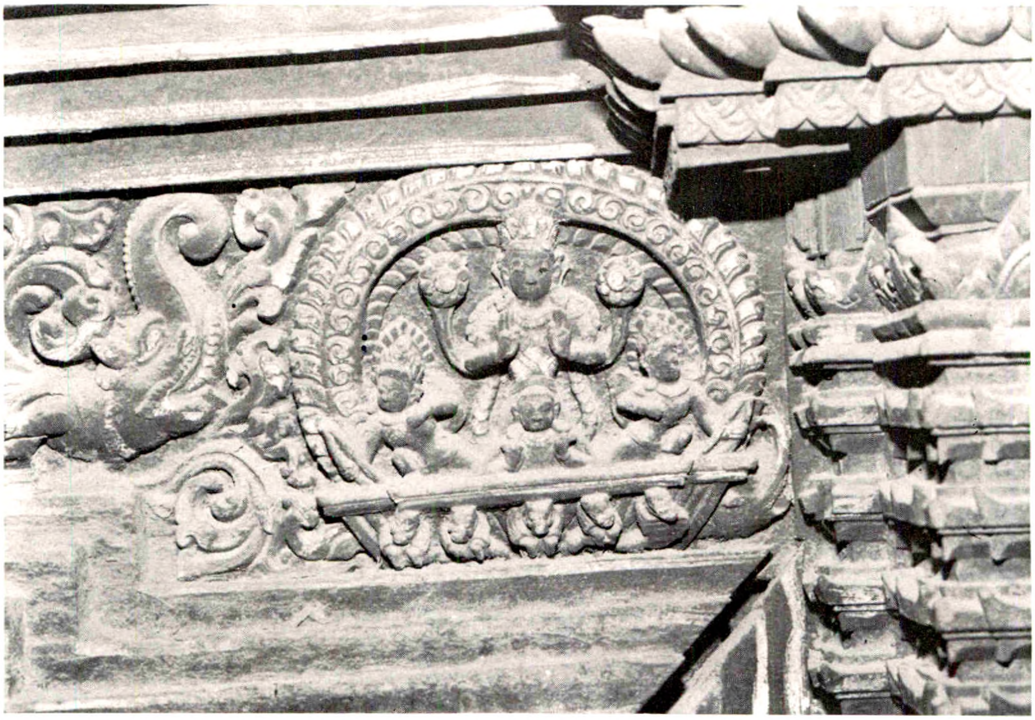


Fig. 6 - Hariśaṅkara temple, east wall, left: Sun/Sūrya.

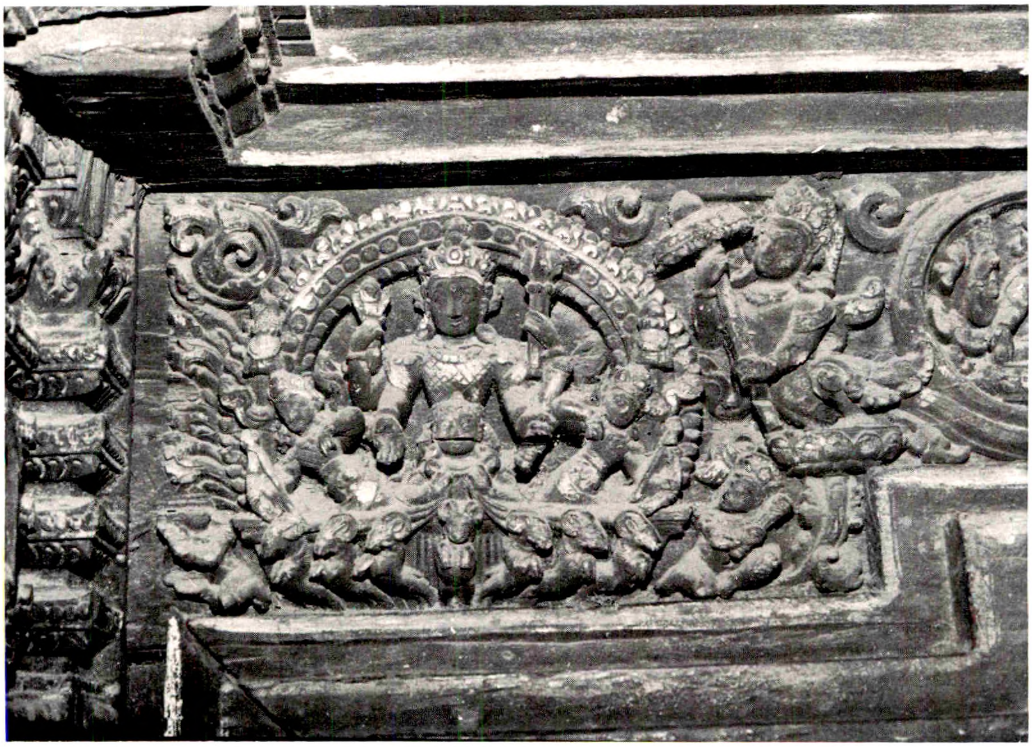


Fig. 7 - Viśveśvara temple, south wall, right: Mars/Maṅgala.

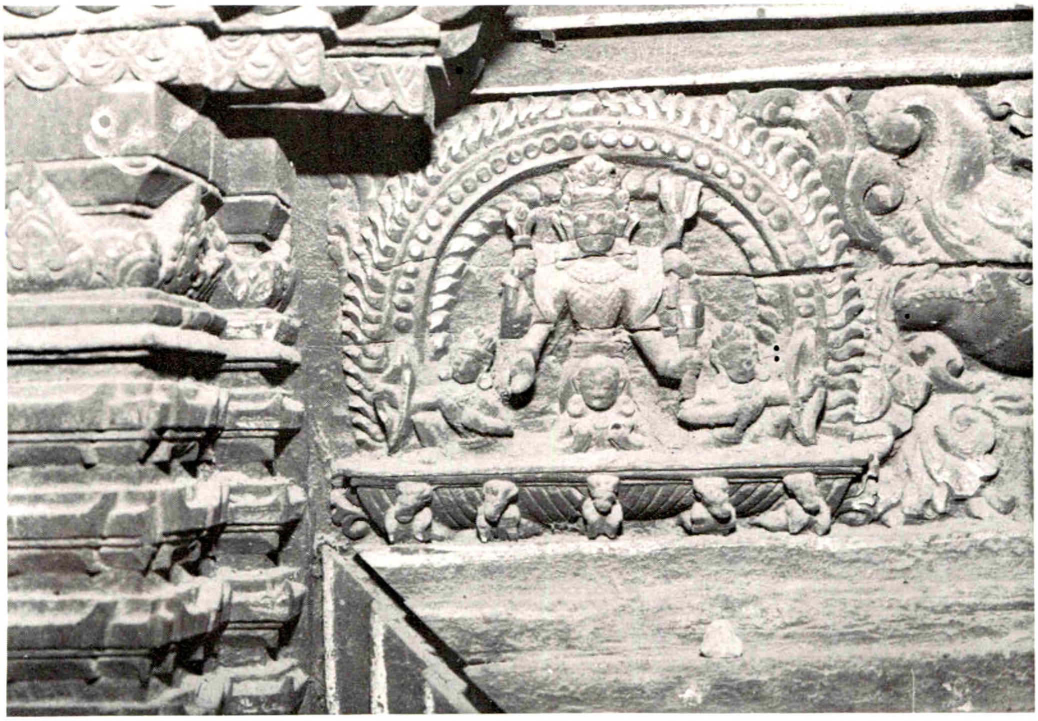


Fig. 8 - Hariśaṅkara temple, south wall, right: Mars/Maṅgala.

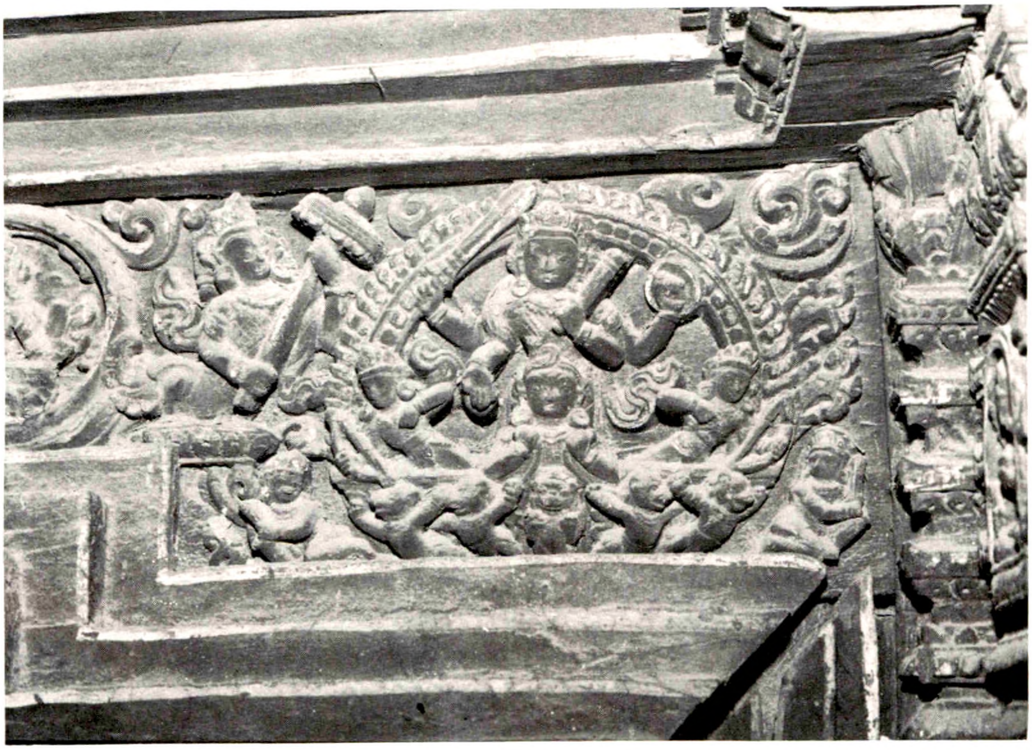


Fig. 9 - Viśveśvara temple, south wall, left: Mercury/Budha.

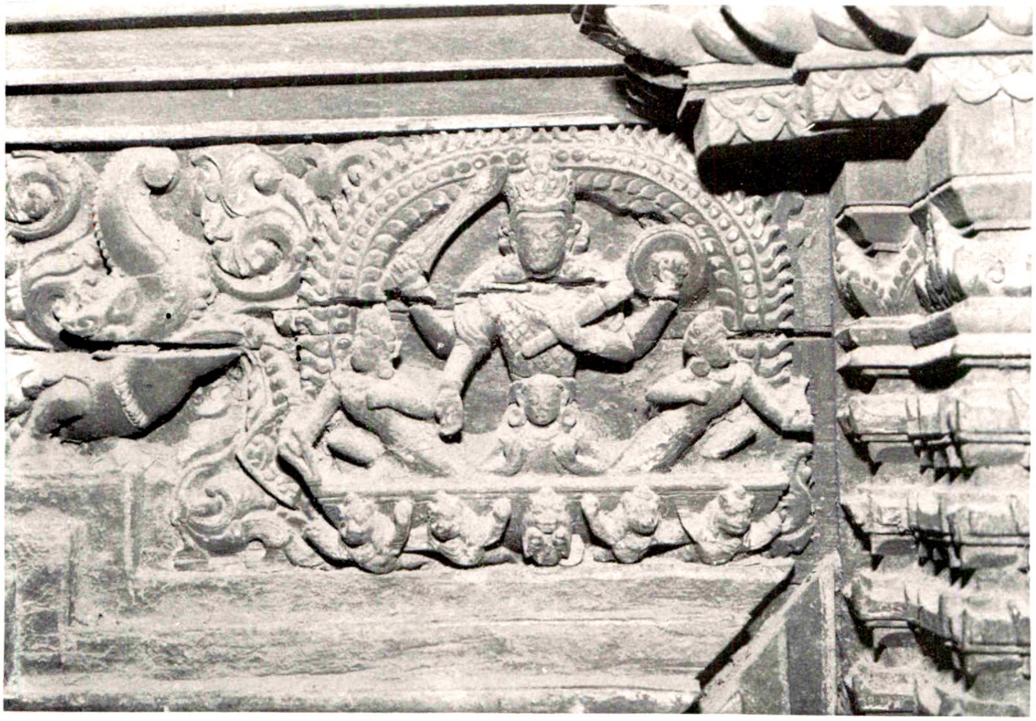


Fig. 10 - Hariśaṅkara temple, south wall, left: Mercury/Budha.

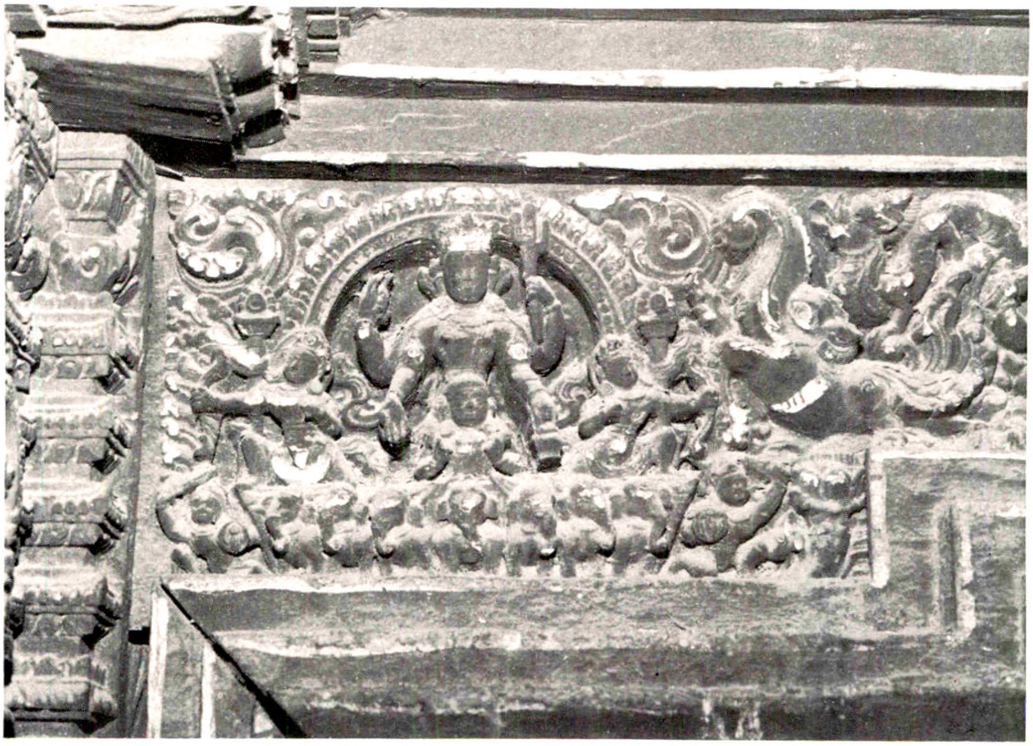


Fig. 11 - Viśveśvara temple, west wall, right: Jupiter/Bṛhaspati.

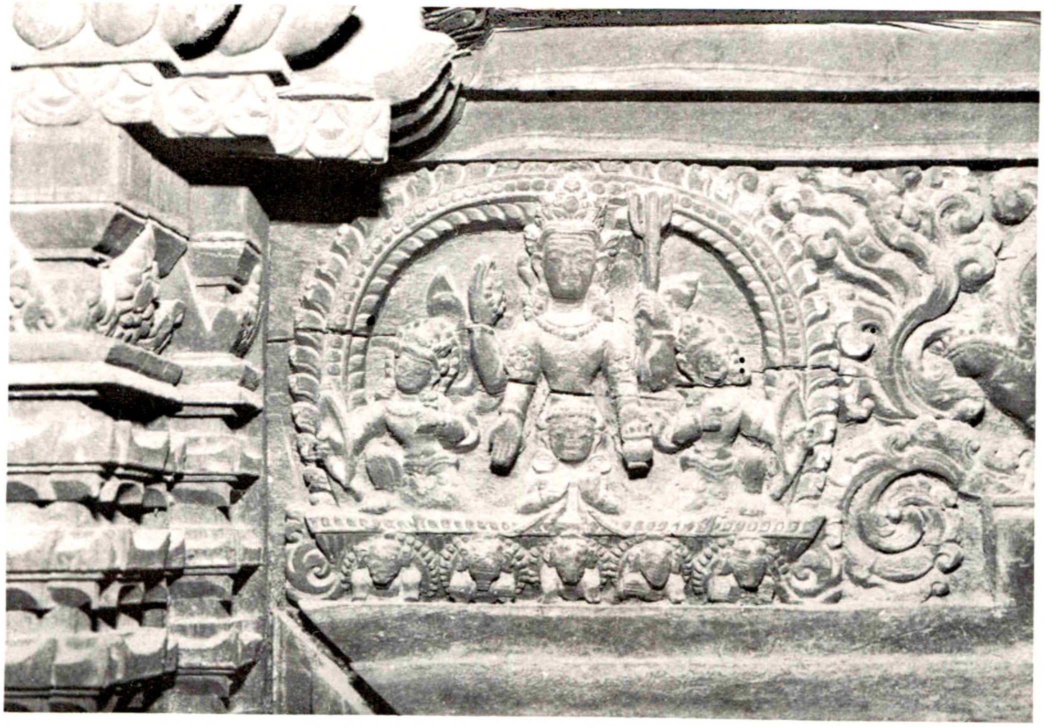


Fig. 12 - Hariśaṅkara temple, west wall, right: Jupiter/Bṛhaspati.

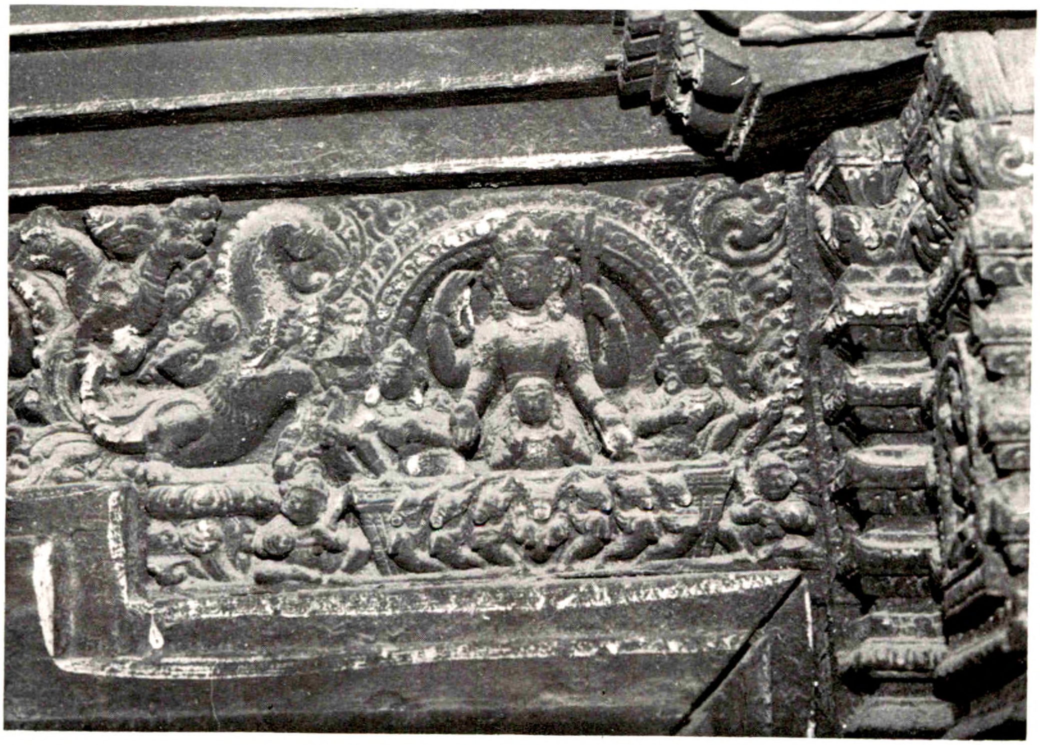


Fig. 13 - Viśveśvara temple, west wall, left: Venus/Śukra.

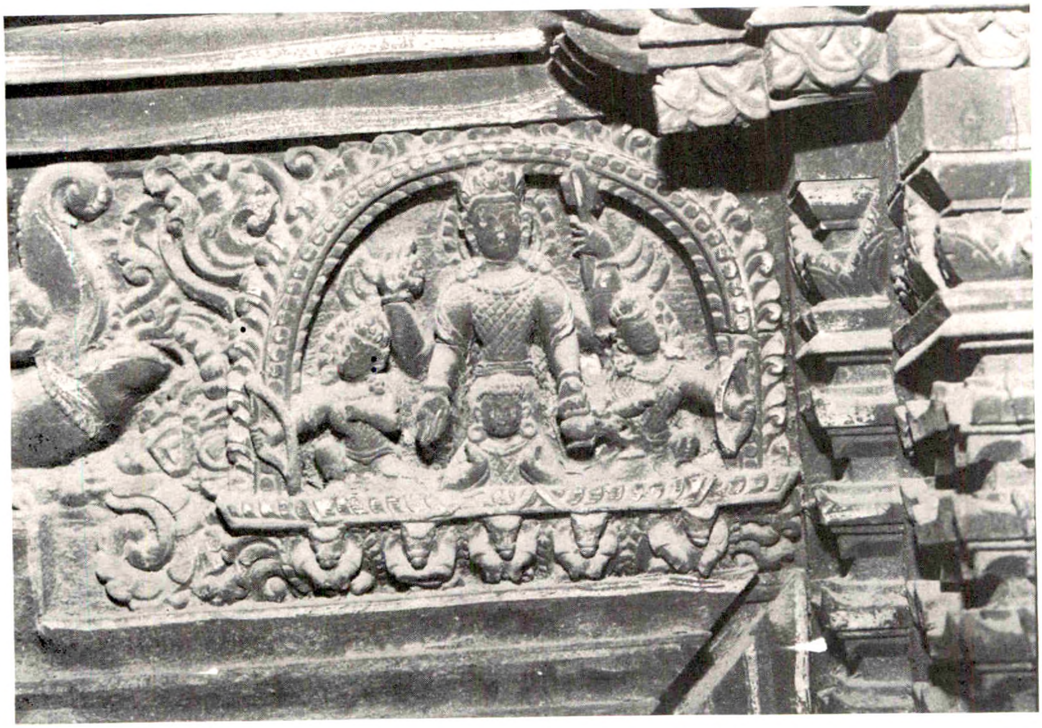


Fig. 14 - Hariśaṅkara temple, west wall, left: Venus/Śukra.

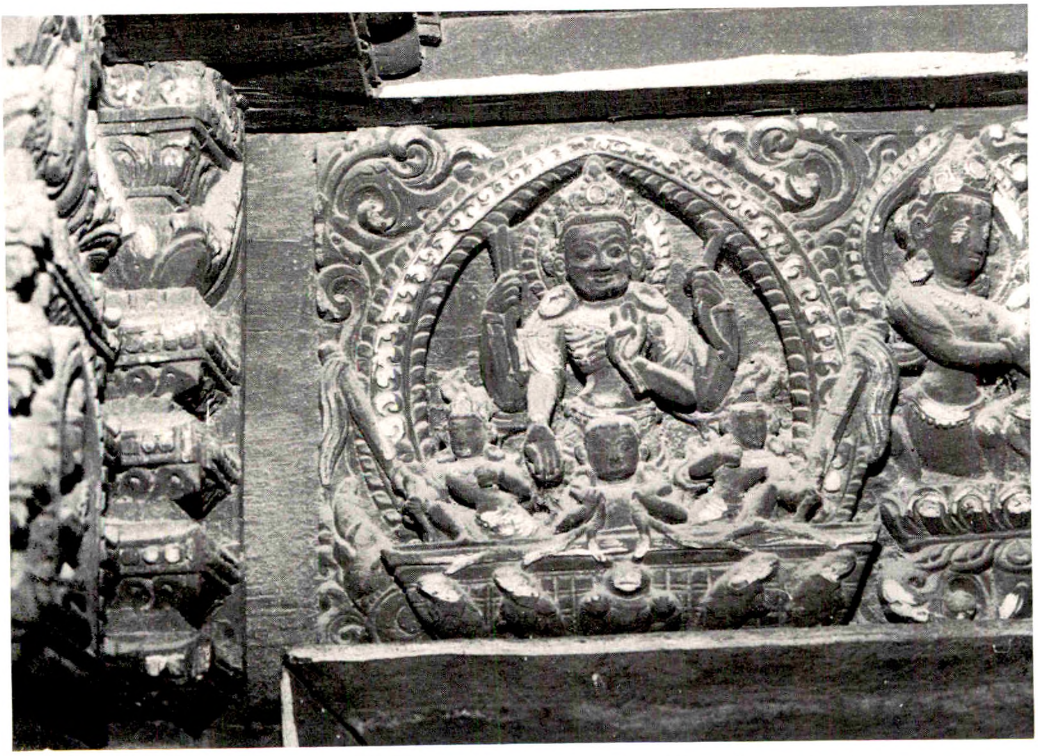


Fig. 15 - Viśveśvara temple, north wall, right: Saturn/Śani.

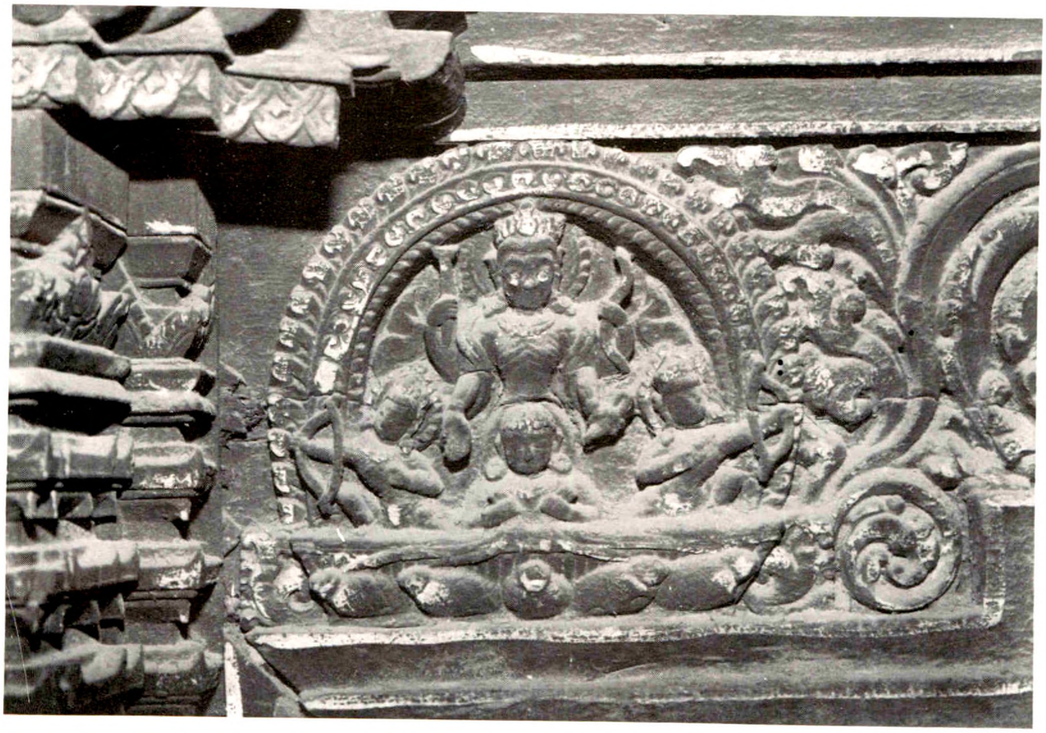


Fig. 16 - Hariśaṅkara temple, north wall, right: Saturn/Śani.

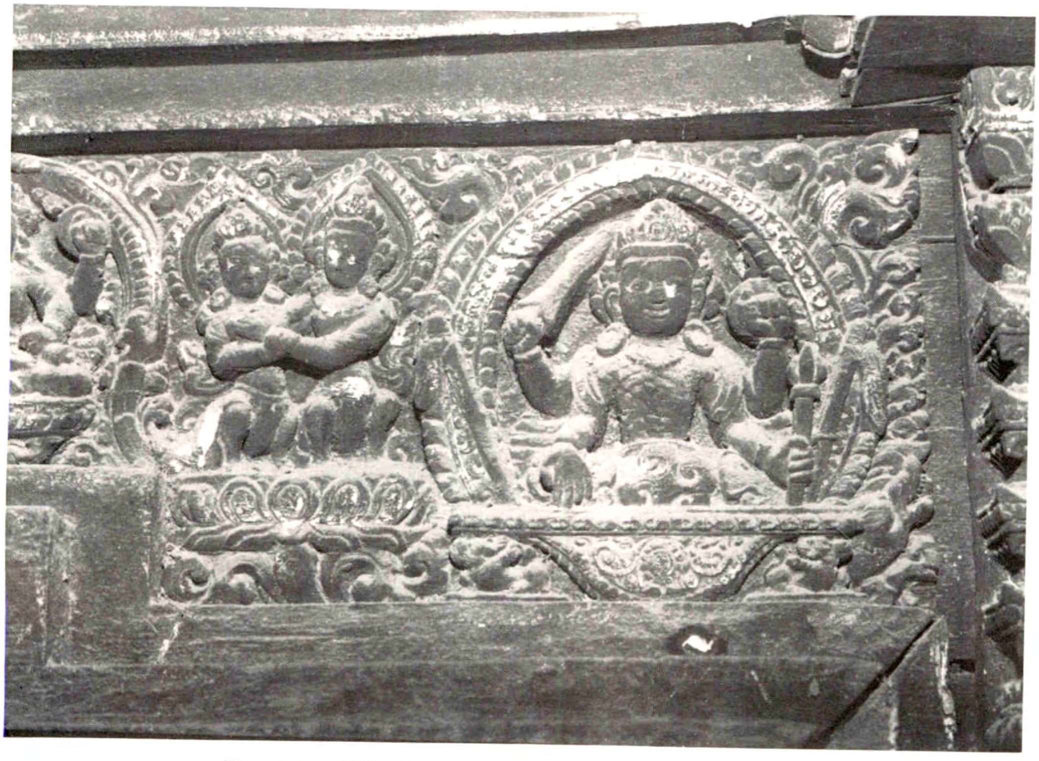


Fig. 17 - Viśveśvara temple, north wall, left: Rāhu.

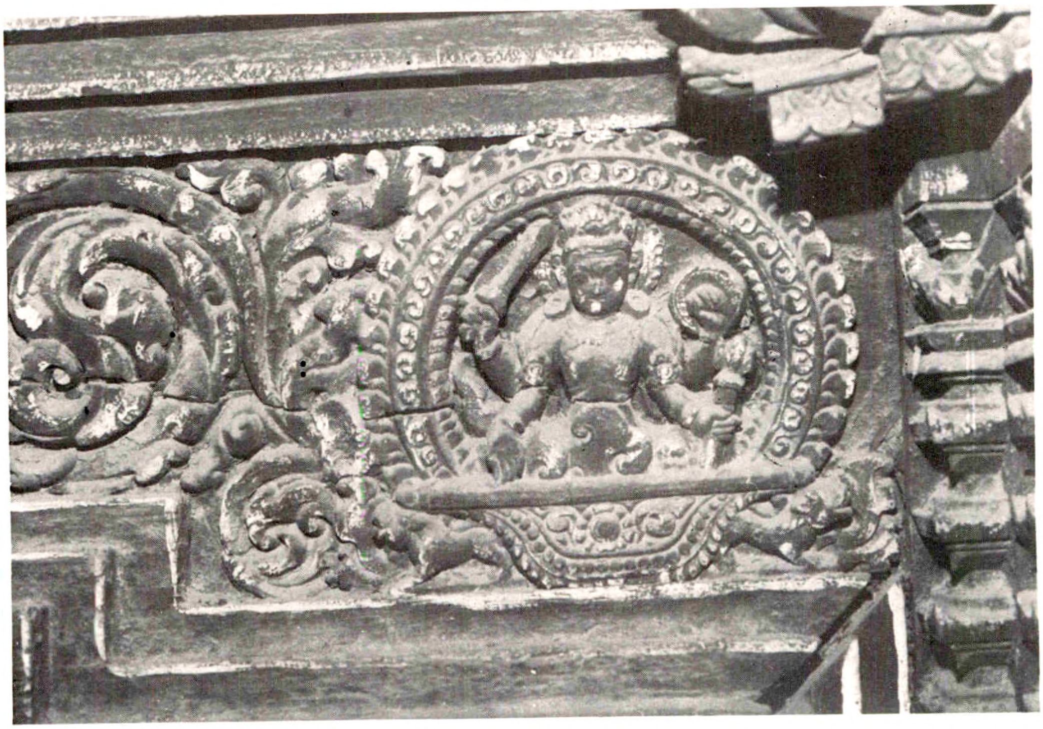


Fig. 18 - Hariśaṅkara temple, north wall, left: Rāhu.

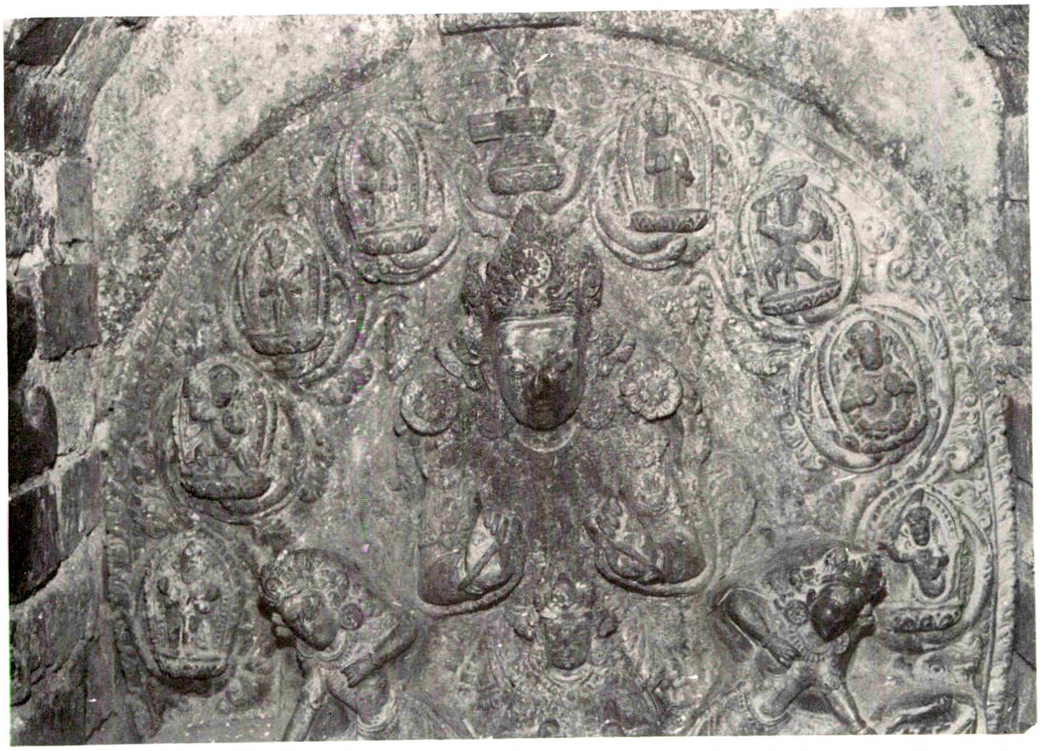


Fig. 19 - Sūrya + *aṣṭagrahas* (Ketu below right) in the west of Indreśvara temple complex, Panauti.

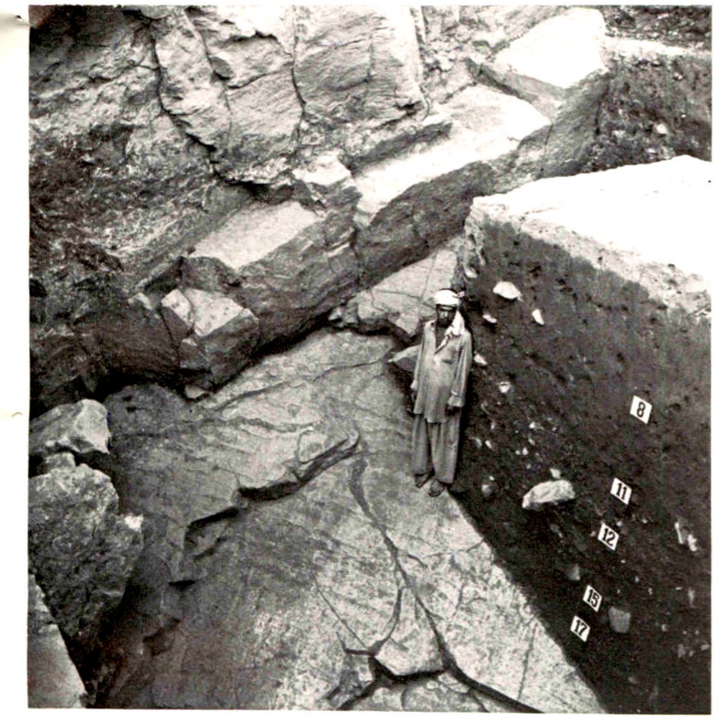
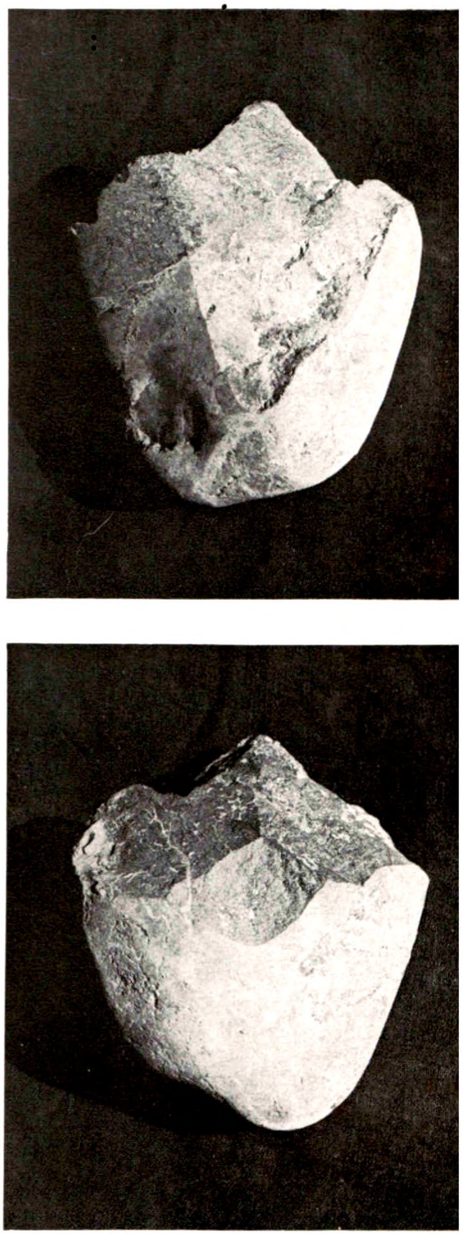


Fig. 1 - Ghālīgai. Area I at the completion of its excavation (Neg. no. Dep. CS 13691/9; G. Stacul).



Figs. 3, 4 - Ghālīgai. Choppers from layer (Period I) (Neg. no. Dep. CS 13700/6 G. Stacul).

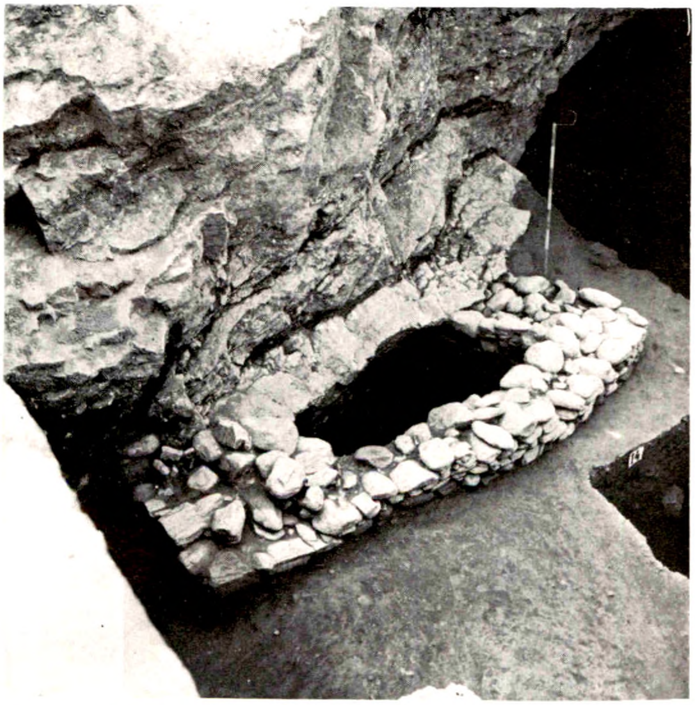


Fig. 2 - Ghālīgai. Stone wall structures in Area J (Neg. no. Dep. CS 13684/5; G. Stacul).

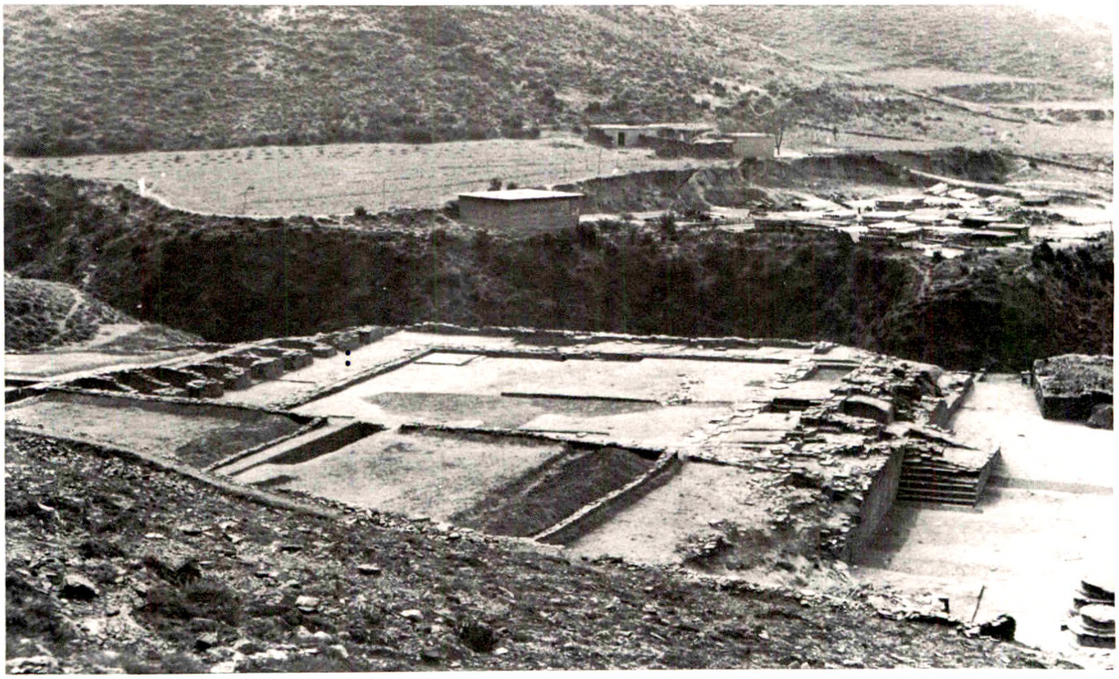


Fig. 5 - Saidu Sharīf I, Monastery. View from northwest (Neg. no. Dep. CS 13886/36; F. Noci).

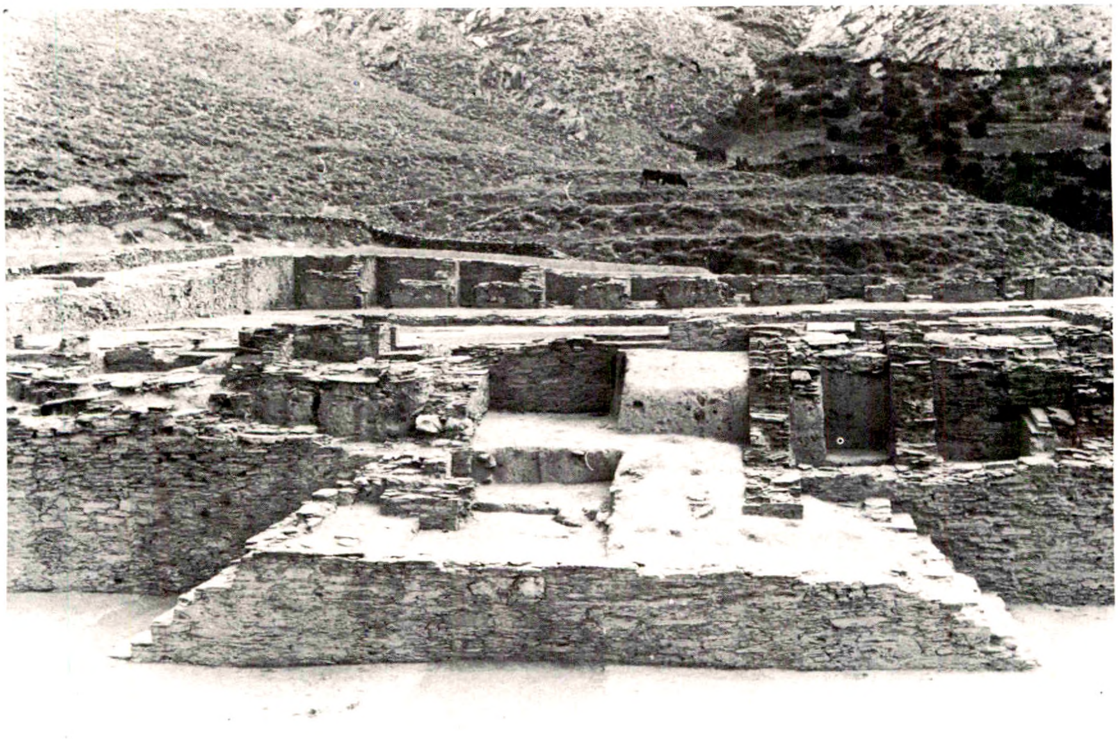


Fig. 6 - Saidu Sharīf I, Monastery. View from west (Neg. no. Dep. CS 13886/34; F. Noci).

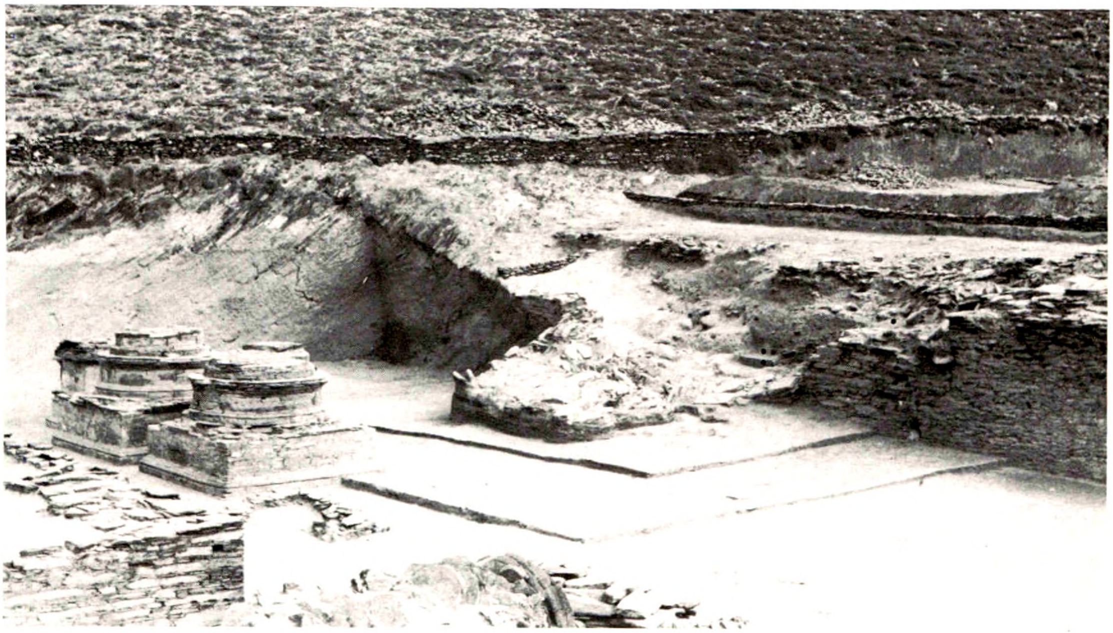


Fig. 7 - Saidu Sharīf I, Sacred Area. Northeastern corner of the Stūpa Terrace, cut in the rock, and the caved-in northern part of the western sustaining wall of the monastery (Neg. no. Dep. CS 13886/33; F. Noci).

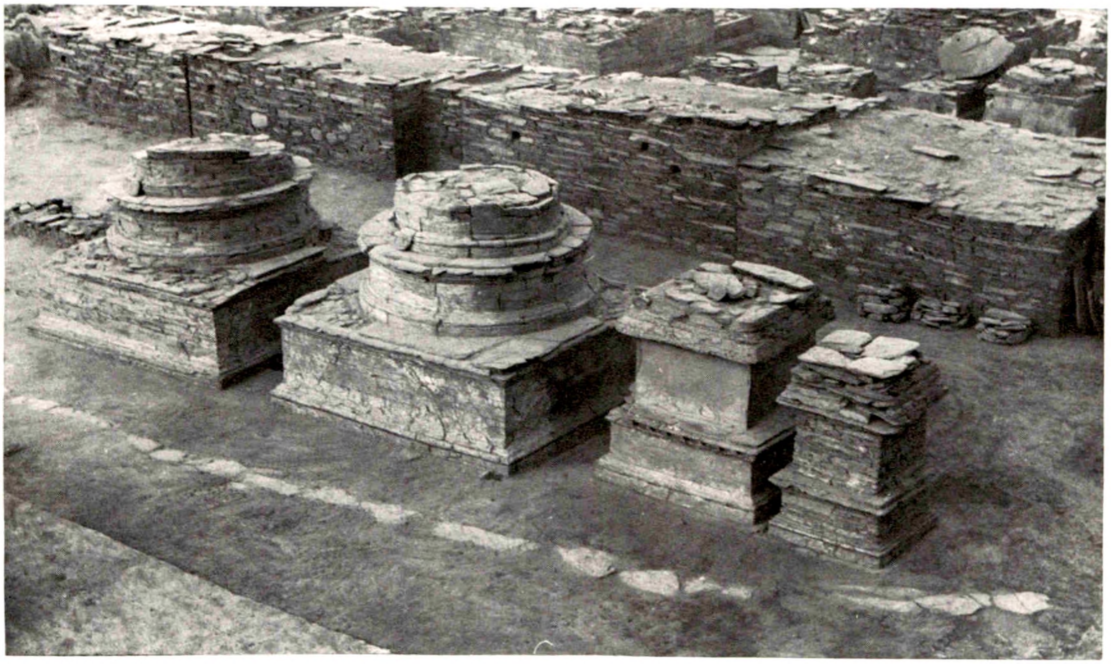


Fig. 8 - Saidu Sharīf I, Sacred Area. *From left,* monuments nos. 25, 26, 40, 58 (Neg. no. Dep. CS 13886/26; F. Noci).

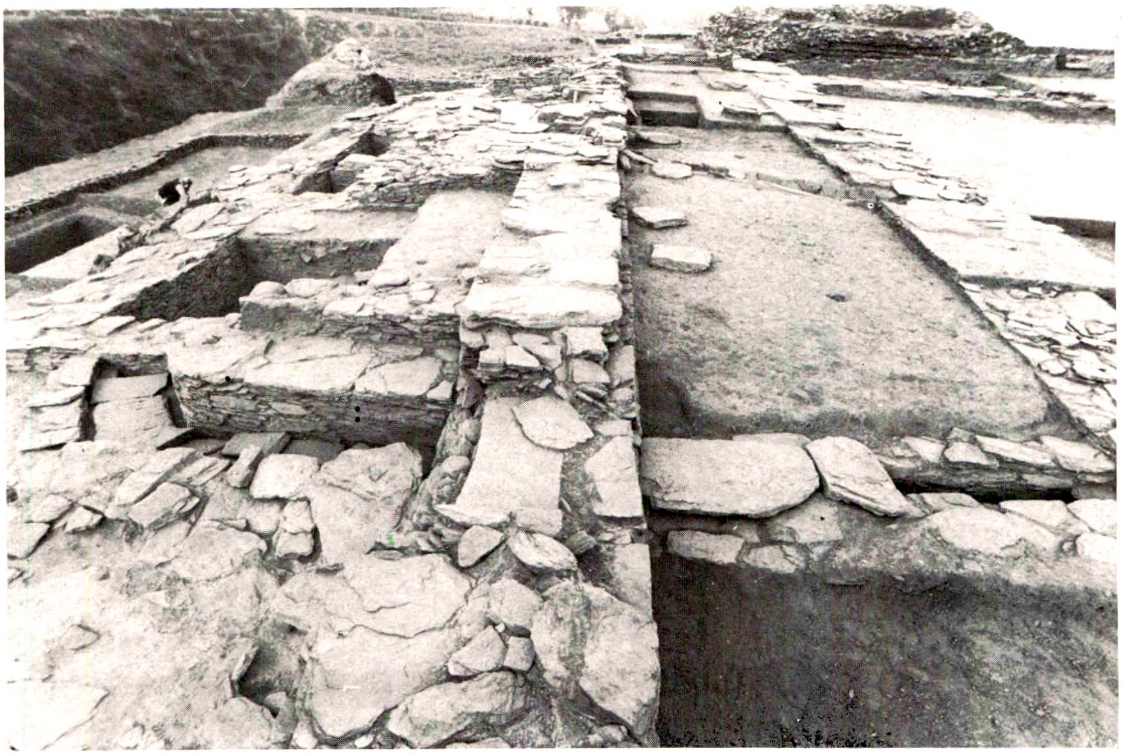


Fig. 9 - Saidu Sharīf I, Monastery, southern side. The portico and the structures outside the southern boundary wall (Neg. no. Dep. CS 13886/16; F. Noci).

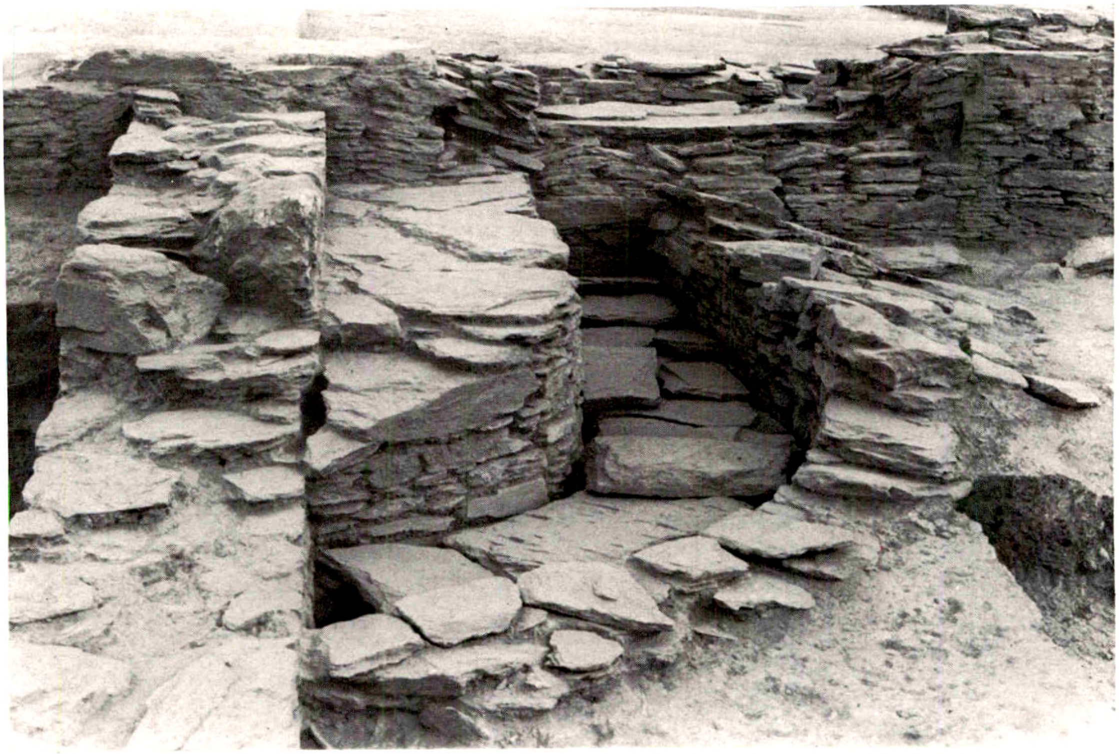


Fig. 10 - Saidu Sharīf I, Monastery, southern side. The drainage channel in SR 4 (Neg no. Dep. CS 13886/17; F. Noci).

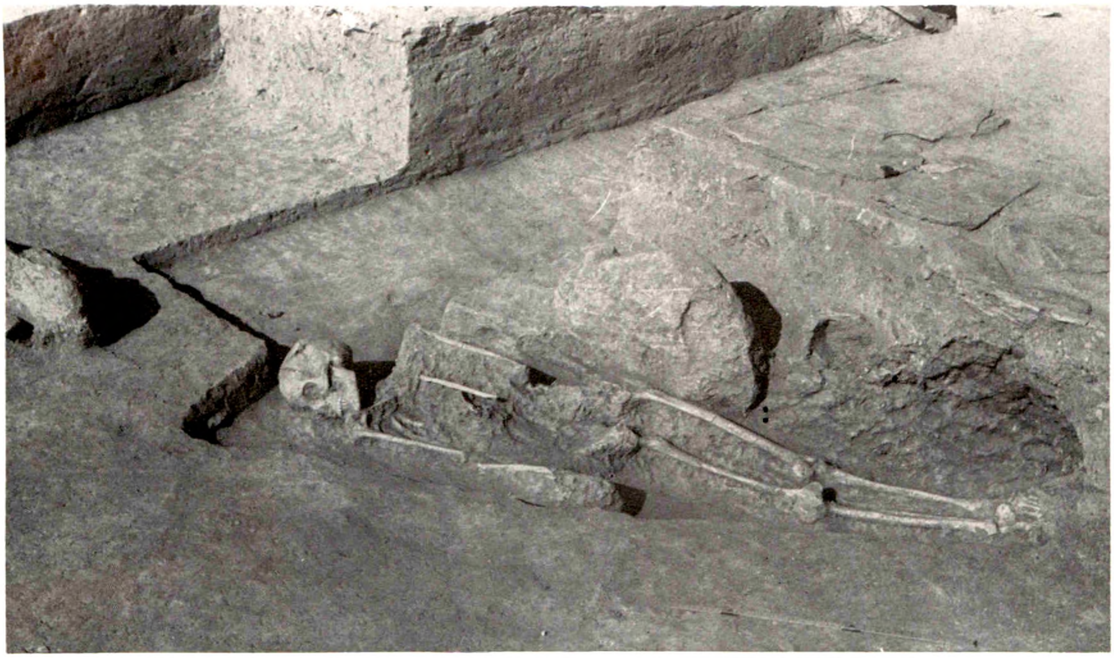


Fig. 11 - Saidu Sharīf I, Sacred Area. The grave south of the Main Stūpa (Neg. no. Dep. CS 13889/31; P. Callieri).

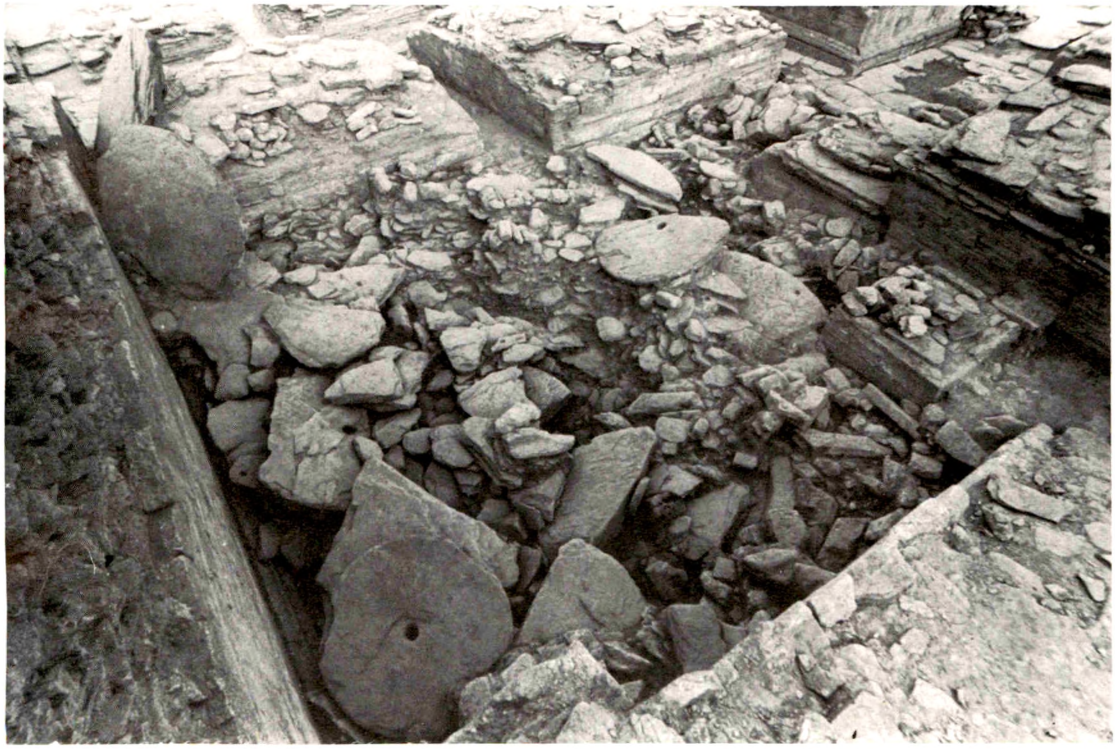


Fig. 12 - Saidu Sharīf I, Sacred Area. Collapsed structures west of the stairway of the Main Stūpa (Neg. no. Dep. CS 13869/; F. Noci).

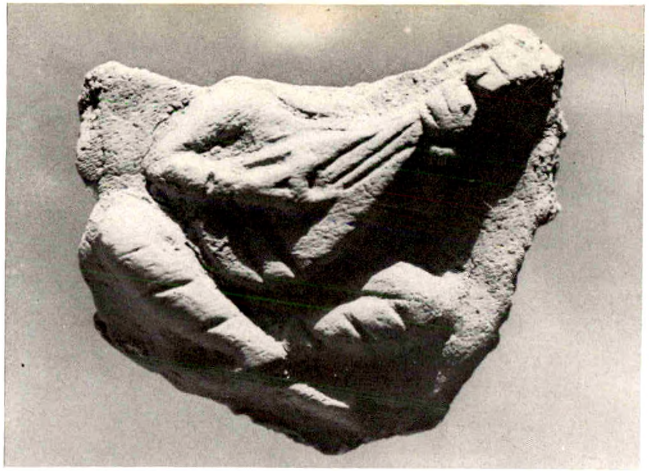


Fig. 13 - Saidu Sharīf I, Monastery. Small terracotta plaque with a *rabab* player in relief: Inv. no. S2167; w. 0.056 m. (Neg. no. Dep. CS 13876/31; F. Noci).

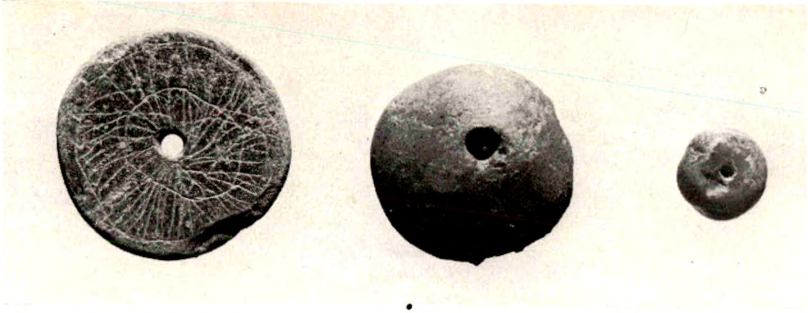


Fig. 15 - Saidu Sharīf I, Monastery. *From left*, small green schist wheel (Inv. no. S225 diam. 0.039 m.); terracotta spindle-whorl (Inv. no. S2250; diam. 0.035 m.); corneli bead (Inv. no. S2239; diam. 0.017 m.) (Neg. no. Dep. CS 13868/1; F. Noci).

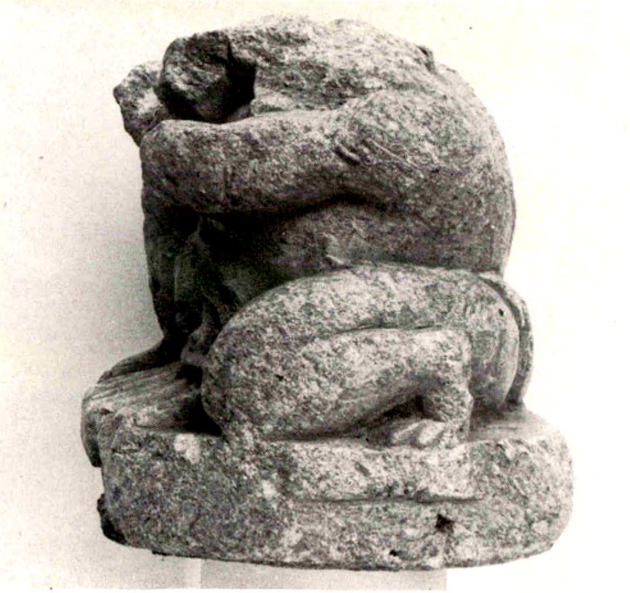


Fig. 14 - Saidu Sharīf I, Monastery. Green schist

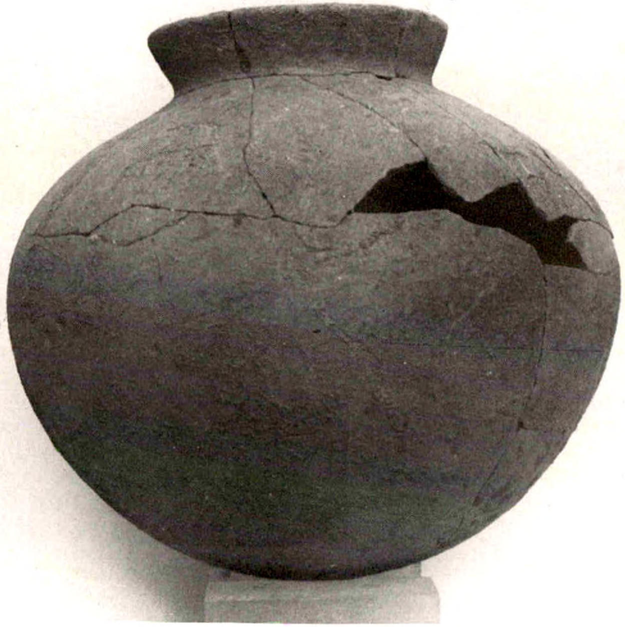


Fig. 16 - Saidu Sharīf I, Sacred Area. Jar found in F 2, near the

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